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Economic Commission for Europe



Food and Agriculture Organization
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FOREST PRODUCTS ANNUAL MARKET REVIEW

1997-1998



UNITED NATIONS

United Nations Economic Commission for Europe
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Timber Section
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NOTE

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Any data provided under the heading "Yugoslavia" relate to the Federal Republic of Yugoslavia which, in accordance with General Assembly Resolutions 47/1 and 47/229, cannot continue automatically the membership of the former Socialist Federal Republic of Yugoslavia.

ABSTRACT

The *Forest Products Annual Market Review, 1997-1998* provides general and statistical information on forest products markets in the UN-ECE region of Europe, North America and the Commonwealth of Independent States. The *Review* begins with a general overview of the forest products markets in the region followed by a description of the economic situation in the region. Two special chapters are included this year: "Certified forest products marketplace" and "Effects of the Asian crisis on ECE region forest products markets." The developments in five sectors are described for markets of roundwood, sawn softwood, sawn hardwood, wood-based panels and paper and paperboard, woodpulp and pulpwood. For each sector, production, consumption and trade are considered and relevant material on specific markets is included. Tables included with the text present detailed information and annex tables contain further reference material.

DATA SOURCES

This *Review* was compiled using data from ECE-region countries responding to a joint FAO/ECE/EUROSTAT questionnaire and other data available until the end of May 1998. The authors express their appreciation to contributing countries which included all major ECE-region producers and traders. In light of the problems with reporting intra-European Union trade statistics, UN COMTRADE statistics or estimations of trade provided by the respondents enabled a timely estimation of the 1997 European market. Supplementary data were obtained from industry associations and other sources where official data were lacking.

Additionally a wide range of specialized trade journals were used to supplement information and the authors have tried to give proper citation to them. Country specialists and institutions, including the important statistical contacts, were called upon for additional information. Most of these people are listed below.

The World Wide Web is a growing source of information for the secretariat in producing this *Review* and the authors appreciate the availability of countries' forest products statistics in this convenient format.

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PREFACE

The *Forest Products Annual Market Review, 1997-1998* provides general and statistical information on forest products markets in the UN-ECE region, including Europe, North America and the Commonwealth of Independent States, for the period beginning 1997 through mid 1998. It is intended to serve as a background document for the annual market discussion for the ECE Timber Committee session, which will be held on 29 September 1998. Furthermore, it provides readers with comprehensive analysis on recent developments in the forest and forest product sector in the ECE region as well as on other regions important for ECE region forest products trade.

The *Review* begins with an overview of the forest products markets, followed by a general appraisal of economic conditions which have directly or indirectly influenced forest products markets in the ECE region. The economic chapter also highlights demand for wood products from construction and furniture manufacturing. In-depth description is given of sectoral developments covering roundwood, sawn softwood, sawn hardwood, wood-based panels, and woodpulp, pulpwood, paper and paperboard. Production, consumption and trade are considered and additional material on specific markets is included. While most tables will be found with their descriptive text, additional tables found in the annex present information on apparent consumption by product and country.

Two special chapters are included in this *Review*. The first, "Certified forest products marketplace" offers an in-depth analysis of the current state of certification of sustainable forest management from a forest products market perspective. The secretariat is indebted to Dr. Eric Hansen of Oregon State University, United States of America, for this important contribution to understanding this complex topic. There are several active certification schemes in the ECE region in mid 1998 and the demand for certified wood products is presently coming from country-based buyers' groups. The final consumer does not generally know about certification and at this time the demand for these products is small. Initial exports of certified forest products began in the ECE region in 1997.

The Timber Committee held a special topic discussion on the "Markets for certified forest products" and a secretariat note produced before the topic's presentation, and a report of the discussion are available from the secretariat or on the Timber Committee's website (see below). Dr. Hansen's research was constrained by the lack of reliable, objective statistics regarding production, trade and consumption of certified forest products--perhaps a consideration for the Committee.

The second special chapter is on the "Effects of the Asian crisis on ECE region forest products markets." The current economic crisis engulfing most of southeast Asia is having worldwide ramifications, including disruptions of both new and established trade channels between ECE region countries and the Asian forest products producers and consumers. The crisis began in mid to late 1997 and by mid 1998 some preliminary statistics and forecasts give an indication of the significance of the situation.

As noted above under the new "Data sources" heading, this *Review* was based upon the most current forest products statistics available from ECE-region countries responding to a joint FAO/ECE/EUROSTAT questionnaire. A number of additional sources of information were used as documented above. As always there is a trade-off between completeness and timeliness and in order to have this document prepared for the Committee's market discussion, it was necessary to conclude the analysis in July 1998.

Frequent readers of the *Review* will note additional changes in this year's issue which are partly in response to suggestions from an on-going 1998 users' survey. This year for example there are two special chapters on topical issues and the authors intend to continue to include special chapters on specific issues and on selected, interesting country market analyses. Readers suggestions and contributions to these chapters are solicited.

Readers familiar with past *Reviews* will also notice that this year's review has a new interior look as a result of more advanced desktop publishing techniques. Highlights are included at the beginning of all chapters. The secretariat would like to express its gratitude to Mr. Jarno Seppälä, a forest products marketing graduate student at University of Helsinki, who was an intern with the Timber Section during the production of the *Review*. Mr. Seppälä was responsible for initiating a new graphical production system. Our experience of engaging an intern during the production of the publication, which has grown enormously in scope and time, was extremely positive and prospective interns are encouraged to apply to work with the secretariat.

The *Review* will be complemented in October 1998 by the *Timber Bulletin* issue No. 6, *Forest Products Markets in 1998 and Prospects for 1999*, which will contain the results of the Timber Committee's market

discussion. All statistics collected in the FAO/ECE/EUROSTAT questionnaire are presented systematically in issue No. 2, *Forest Products Statistics, 1993-1997*. There will be a delay in publication of this year's *Forest Products Statistics* pending recovery from illness of the statistician. Other issues of the *Timber Bulletin* are listed at the end of the *Review*.

The Timber Committee has a website on the World Wide Web which includes much of its work and documents, including for the first time, this *Review*. It will eventually be expanded to include the TIMBER database (which continues to be available on diskette). The address for the website is: <http://www.unece.org/trade/timber>

It would not be possible to produce the *Review* without the devoted efforts of a large number of people. The base data were supplied by country correspondents, who are acknowledged by name in the companion issue of the *Timber Bulletin* "Forest Products Statistics, 1993-1997". Some of these correspondents and other national experts also contributed supplementary data, notably on prices, and background information and explanation of trends. Particular mention should be made of the help received from the people listed on the adjoining page.

The *Review* is produced as a joint effort by the Geneva Timber Section and Ed Pepke led and coordinated the work. Claude Huybrechts maintains the TIMBER database and produced the basic tables. The individual chapters had the following principal authors: 1. Ed Pepke; 2. Kit Prins (drawing on the *Economic Survey of Europe* prepared by the Division of Economic Analysis of ECE); 3. Eric Hansen (United States); 4. Ed Pepke; 5. Kit Prins; 6. Ed Pepke; 7. Ed Pepke; 8. Jorge Najera; 9. Kit Prins. Kit Prins reviewed the whole draft. Jarmo Seppälä produced all the graphics. Romi Chopra was responsible for preparation, formatting, integration and presentation of the text, tables and graphs. This manuscript was completed on 23 July 1997. More information may be obtained by contacting:

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EXPLANATORY NOTES

"Apparent consumption" is calculated by adding a country's production to imports and subtracting exports. Since data are not universally available, the apparent consumption volumes are not adjusted for changes in the level of stocks.

"Net trade" is calculated as the balance of exports and imports and is shown as "+" for net exports, when exports exceed imports and is shown as "-" for net imports, when imports exceed exports. Trade data for fifteen European Union countries include intra-EU trade, which is often estimated by the countries.

The countries of the former USSR and other former centrally planned countries of central and eastern Europe are referred to collectively as "countries in transition to market economies". The term "central and eastern Europe", used exclusively for presentational convenience, includes Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia, The former Yugoslav Republic of Macedonia and Yugoslavia.

The term "softwood" is used synonymously for "coniferous." "Hardwood" is used synonymously for terms "non-coniferous" or "broadleaved" wood.

When no data were available, the previous year's figure is used to calculate the regional total. As a convention in the analysis, one time period, for example first quarter of 1997, is compared to the analogous time period, continuing this example, the first quarter of 1996. However in the case of rapidly changing markets, for example the steep decline in the Asian forest products markets in the fourth quarter of 1997, this convention can present a distortion, or at least different picture than if successive quarters are compared.

SYMBOLS AND ABBREVIATIONS USED

-	nil or negligible
...	not available
*	secretariat estimate or unofficial figure
\$	United States dollar unless otherwise specified
c.i.f.	customs + insurance + freight included
CIS	Commonwealth of Independent States
EU	European Union (currently 15 States)
f.a.s.	free alongside ship
FOB	free on board
GDP	gross domestic product
IMF	International Monetary Fund
m ³	cubic metre (solid volume of roundwood or processed product)
m.t.	metric ton
MW/h	Megawatt per hour
NIEs	Newly industrializing economies
Q	Quarter
T	Trimester
USDA	United States Department of Agriculture

CHAPTER 1

OVERVIEW OF FOREST PRODUCTS MARKETS IN 1997 AND EARLY 1998

Highlights

- ECE region forest products consumption increased in 1997, in some cases to record levels.
- European sawn softwood markets, both within Europe and export, increasingly to Japan, were strong in 1997.
- North American housing construction and furnishing drew increased quantities of sawnwood and wood-based panels.
- Globalization of forest products markets was demonstrated in late 1997 and in 1998 as the economic crisis in Asia disrupted trade with the ECE region.
- European consumption of wood-based panels, mainly particleboard, increased close to North American levels, which are increasingly made up of OSB and MDF.
- Oversupply of some forest products in the ECE region has weakened prices.
- Some initial signs point to a slowdown in the decline of forest products markets in the Russian Federation.
- A number of new and continuing trends are shaping the ECE region forest products markets, e.g. new markets for certified forest products, increasing substitution by engineered wood products for solid wood, and corporate restructuring.

Forest products markets generally improved in the ECE region (Europe, North America and the CIS) in 1997. Consumption in *Europe and North America* of most forest products, sawnwood, wood-based panels and paper and paperboard increased and to record levels in some cases (table 1.1).

European sawn softwood markets improved significantly in 1997 following their analogy in last year's *Review* as a train which had "got back on track" in the second half of the year and was picking up steam going into 1997. Profiting from strong markets and rising prices, for both domestic and export consumption (including Asia), production increased strongly in 1997. But then at the end of 1997 that train overran the station as demand softened with the weak European construction sector and as Asian demand fell sharply. Declining sawn softwood prices in late 1997 turned upwards in Europe in 1998 as supplies were adjusted to demand.

European sawnwood exports (mostly softwood, but also hardwood) to Asian countries have dramatically increased in the last few years. In 1997

the European share of the Japanese sawnwood market had increased to 17% from negligible volumes as recently as 1993.

North American sawnwood markets continued their steady upward climb as housing construction remained strong in 1997 and in early 1998 and production rose to meet the heightened demand. Total sawn softwood imports, mostly by the United States and mostly from Canada, ended their recent rising trend, partly because of their Softwood Lumber Agreement. However new sources have increased their small market shares, for example sawnwood from Europe. In early 1998 sawmillers accustomed to strong Asian export demand, were seeking alternative domestic markets and in the West, reducing production. The shift in potential North American log exports to Asia back to the domestic market, as well as increased production from the southeastern United States infers that additional production increases could constrain imports in 1998 as in 1997. Rising European sawnwood export prices in early 1998, in contrast to

TABLE 1.1
Apparent consumption of sawnwood, wood-based panels and paper
and paperboard in Europe, the Russian Federation and North America
1994 to 1997

		Million	Volume				Change 1996 to 1997	
		units	1994	1995	1996	1997 ^a	Volume	Per cent
EUROPE								
Sawnwood	m ³		92.69	91.11	89.86	96.18	6.32	7.0
Wood-based panels	m ³		40.96	44.47	43.86	46.85	2.99	6.8
Paper and paperboard	m.t.		72.90	72.77	73.13	75.42	2.29	3.1
Total (equivalent volume of wood in the rough)	m ³		466.28	468.88	466.80	489.53	22.73	4.9
Change on previous year								
Volume				2.60	-2.08			
Per cent				0.6	-0.4			
RUSSIAN FEDERATION								
Sawnwood ^b	m ³		25.37	20.64	17.33	14.74	-2.59	-14.9
Wood-based panels ^c	m ³		3.63	2.94	2.23	2.26	0.03	1.3
Paper and paperboard	m.t.		2.53	2.47	2.21	2.40	0.19	8.6
Total (equivalent volume of wood in the rough)	m ³		56.11	47.04	39.71	36.15	-3.56	-9.0
Change on previous year								
Volume				-9.07	-7.33			
Per cent				-16.2	-15.6			
NORTH AMERICA								
Sawnwood ^b	m ³		158.61	153.31	160.58	166.16	5.58	3.5
Wood-based panels ^c	m ³		45.74	44.43	48.02	48.51	0.49	1.0
Paper and paperboard	m.t.		91.76	96.62	90.66	95.08	4.42	4.9
Total (equivalent volume of wood in the rough)	m ³		656.76	662.19	659.09	683.02	23.93	3.6
Change on previous year								
Volume				5.43	-3.10			
Per cent				0.8	-0.5			

^a Preliminary.

^b Excluding sleepers.

^c Excluding veneer sheets.

falling North American prices, could also hinder imports of European sawnwood.

Sawn hardwood consumption increased slightly in Europe, partly as a result of greater imports from North America. In North America, production increased to record levels and prices rose for lighter coloured species that found favour in domestic as well as European and Asian markets.

The globalization of forest products markets was demonstrated in 1997 as the economic and political crisis in Asia had a profound effect on world forest products trade. Japan entered into a deep recession and housing construction, which had significantly

fallen in 1997, continued to decline in 1998. Domestic production, mostly based on imported raw materials, and imports of all forest products had decreased since mid 1997. Japan is the largest tropical forest products importer and the drop in economic activity had directly and indirectly affected the whole of Asia, as well as the ECE region. Conditions were even more difficult for southeast Asian producers: despite sharply devalued currencies, they were unable to increase market share because of multiple supply constraints, often linked to the chaos in the banking system.

In 1998 ECE region forest products exports to Japan, and many other Asian destinations, with the possible important exception of China and Hong

Kong, had tapered significantly. Prices were forced lower, but with initial stocks of higher-priced wood. Asian importers could not absorb more, especially in light of the unpredictable outlook. Asian plywood, sawnwood and log prices crashed in dollar terms with currency devaluations, ending in many cases less than half of their former values. As a consequence of the current crisis, a structural change in Asian forest products markets may be underway, characterized by more trade in further processed products and the substitution of products based on small wood, often of plantation origin (e.g. oriented strand board (OSB), medium density fibreboard (MDF), market pulp, engineered wood products), for traditional solid wood products of the tropical forest.

European panel markets rose in 1997, especially for particle board whose production and trade increased again. Demand and production of MDF soared, but OSB still has only a small (but growing) share of the wood-based panel market in Europe. Consumption of wood-based panels, particle board, fibreboard and plywood combined, are approaching that of North America. Europe's net exports expanded in 1997.

North American panel markets continued to evolve away from plywood and particle board with substitution by OSB and MDF. Strong demand for these newer panels due to more housing and furnishings, was met by a surge in manufacturing which created localized oversupply situations and prices have fallen, or at least not risen.

Paper and paperboard consumption increased throughout the ECE region. Pulp production also rose, but less fast, and market pulp prices recovered from the low of early 1996. Record volumes of pulpwood were consumed. Pulpwood prices ceased to fall in Europe and rose through 1997 in several countries. The trade in pulpwood from Russia and the Baltic states to Finland and Sweden continued to expand.

While still experiencing severe economic difficulties, some signs were evident that the declines in forest products markets in the Russian Federation have slowed. Roundwood removals continued to decline in 1997, as did sawnwood production, but the exports of some products increased slightly, specifically sawnwood, panels and pulpwood. Log exports from Russia to Japan continued to grow through 1997, increasing in both volume and market share in a declining market which has fallen in volume by about one-third over the last decade, and which was falling faster in mid 1998. Other countries in transition fared better in 1997 and some had both rising consumption and rising exports as their economies progressed.

Some additional *trends* are occurring in the ECE region forest products markets. While production and trade have increased for many products, their profitability has not always followed. Complaining that high log costs constrain profitability, where possible sawmillers have increased efficiency, and sometimes production, to achieve greater economies of scale. Pulp manufacturers have sought lower-priced raw materials and have succeeded in economizing by incorporating higher recycled fibre contents. Composite panel manufacturers have always been based on residues, but now those residues might not be only wood. Veneer manufacturers have learned to extend their resource through thinner slicing and application on composite panels and mouldings.

Engineered wood products continue to substitute for solid wood products, which is perceived to be better than the substitution by non-wood products. Wooden I-beams, glulam beams, laminated veneer lumber (LVL), composite panel products like OSB and MDF, paralam and other reconstituted wood products are changing housing and furniture construction practices and increasing market shares.

Markets for *certified forest products*, i.e. those products coming from forest lands which have been certified to be sustainably managed, are still in their infancy. Some of the first shipments of certified sawnwood occurred in the ECE region in 1997. At this time the incentive to produce certified products is not for immediate profitability, but rather to protect or increase market share or to establish a positive corporate image. Buyers' groups have been established in a number of ECE member countries and currently some larger do-it-yourself store chains and some publishers are providing the main impetus for the development of these markets, rather than the final customers themselves.

Corporate mergers continue in order to gain market share, acquire forest resources and manufacturing capabilities and to achieve efficiencies of corporate, including marketing structures. Both new products, e.g. engineered wood products, as well as traditional primary forest products, e.g. pulp and paper manufacturing, are increasing in efficiency and necessitating corporate restructuring. In some sectors automation and modernization have been essential to maintain profitability when either product prices are constrained by competition or raw material costs are increasing or both.

Forecasts for 1998 by the Timber Committee in October 1997 were generally positive for Europe and North America, especially in the pulp and paper sector, including pulpwood (some of which is used in panels manufacturing). Panel production, especially MDF

was forecast to grow along with consumption, or in the case of Europe ahead of consumption. Sawnwood consumption and production in Europe was forecast to fall in contrast to North America. Trade in both regions was forecast to increase. Overall the forecasts for the Russian Federation were for slight increases in 1998, ending the general declines since 1992.

The above overview simplifies a complex situation which is further detailed in the following chapters.

CHAPTER 2

ECONOMIC FACTORS AFFECTING FOREST PRODUCTS MARKETS

Highlights

- 1997 saw strong economic growth in Europe and North America. Good growth conditions are expected to continue in 1998.
 - Perhaps 1997 was the year when the Russian economy stopped contracting and started to expand.
 - Growth was satisfactory for many countries in transition, but negative or weak for others, notably in south-east Europe and central Asia.
 - A major economic, financial and currency crisis affected Asia, with Japan in deep recession in mid 1998.
 - New residential construction continues to stagnate in many European countries, but renovation is still growing strongly. United States housing starts remain at a rather high level. The Japanese construction sector plunged into recession in April 1997 and has not yet recovered.
 - European furniture production fell slightly in 1997, but a small increase is forecast for 1998.
-

The analysis below is taken from the *Economic Survey for Europe*, number 1 and number 2 of 1998, prepared by the Economic Analysis Division of the secretariat of the Economic Commission for Europe.

2.1. General economic developments

(i) Economic developments in 1997

The economic situation improved significantly in much of the ECE region in 1997. In the western market economies (western Europe and North America) it was the best year for GDP growth – an average 3.3% – since 1989. In the transition economies of eastern Europe, the Baltics and the CIS, it was the first time since 1989 that their average growth rate was positive (just under 2%), a reflection of continued steady growth in eastern Europe and, finally, the apparent end to seven consecutive years of falling GDP in Russia.

The relatively high growth rate of the western economies was heavily influenced by the unexpected strength of the *United States* economy where buoyant domestic demand was responsible for an increase in GDP of 3.8%, the largest rise since 1988. Household

expenditures increased strongly (3.3%), but so did fixed investment, which rose nearly 6.5%.

In *western Europe*, the growth of GDP averaged 2.7% in 1997, a clear improvement on the 2% increase in 1996. There was a steady, but by no means dramatic, improvement in domestic demand during the year and, because of their very close trading links, this tends to have a multiplier effect through the European economies. Nevertheless, west European growth was still largely driven by exports and especially by the import demands of North America, the transition economies of eastern Europe and the CIS, and developing countries outside East Asia. Fixed investment picked up a little in 1997 but it was very weak in France, Germany and Italy, and even in the United Kingdom, where growth has been relatively strong for the last four years and profits relatively high, the increases have not been very large. The investment that has taken place has tended to be in machinery and equipment rather than new buildings, and focused on the rationalization of production rather than the expansion of new capacities which would lead to higher employment.

TABLE 2.1.1
Real GDP in the ECE market economies, 1995 to 1998
(Percentage change over previous year)

	1995	1996	1997	1998 ^a
Western Europe	2.7	2.0	2.7	2.8
European Union	2.5	1.7	2.6	2.8
4 major countries	2.3	1.4	2.3	2.5
France	2.1	1.6	2.3	3.0
Germany	1.8	1.4	2.2	2.6
Italy	2.9	0.7	1.5	2.5
United Kingdom	2.7	2.2	3.3	1.9
17 smaller countries	3.3	3.0	3.6	3.5
Austria	2.1	1.6	2.5	2.7
Belgium	2.1	1.5	2.9	2.5
Cyprus	5.5	1.9	2.4	4.0
Denmark	3.1	3.5	3.4	2.5
Finland	5.1	3.6	5.9	4.0
Greece	2.1	2.7	3.5	3.0
Iceland	1.1	5.5	5.0	4.6
Ireland	10.4	7.7	10.5	7.5
Israel	6.4	4.5	1.9	2.5
Luxembourg	3.8	3.0	3.7	3.4
Malta	7.3	4.2	2.8	..
Netherlands	2.3	3.3	3.4	3.8
Norway	4.1	5.5	3.4	4.6
Portugal	1.9	3.0	3.5	3.8
Spain	2.7	2.3	3.4	3.5
Sweden	3.9	1.3	1.8	2.9
Switzerland	0.8	-0.2	1.1	2.0
Turkey	7.2	7.0	6.3	4.5
North America	2.0	2.6	3.8	2.7
Canada	2.2	1.2	3.7	3.0
United States	2.0	2.8	3.8	2.7
Total above	2.3	2.3	3.3	2.8
Memorandum item:				
Japan	1.5	3.9	0.9	-0.5
Total above, including Japan	2.2	2.6	2.9	2.3

Source: National statistics; OECD National Accounts (Pans), various issues.

Note: All aggregates exclude Israel. Growth rates of regional aggregates have been calculated as weighted averages of growth rates in individual countries. Weights were derived from 1991 GDP data converted from national currency units into dollars using purchasing power parities.

^a Forecasts.

A general feature of developments in the western market economies in 1997 was the persistence of very low rates of inflation and the absence of any serious incipient labour or other cost pressures. In western Europe the increase in consumer prices averaged less than 2% in 1997, and despite a long period of sustained output growth it was also under 2% in the United States towards the end of the year.

In the labour markets, the favourable changes in production led to a small decline in the average unemployment rate in western Europe to 9.8% in the first quarter of 1998, down from 10% in the same quarter of 1997.

In eastern Europe and the Baltic states, 1997 was generally a year of relatively high rates of growth. The average rate for central and eastern Europe (2.8%) was actually much lower than in 1996 (4.1%), but this was largely due to the large falls in GDP in Albania, Bulgaria and Romania, and a sharp deceleration of growth in the Czech Republic. In these countries policy makers have been grappling with the consequences of severe financial crises in 1996 and 1997, which in turn were the result of poor macroeconomic fundamentals, and weak reform programmes, especially as regards the banking and enterprise sectors. At the root of most of these setbacks is the lack of a political and social consensus on a radical transformation programme. Considerable progress has been made towards establishing macroeconomic stability in Bulgaria, especially since the creation of a currency board in July 1997, but a long process of structural adjustment still lies ahead. Together with Bosnia and Herzegovina and Yugoslavia, the increasing divergence between economic reform and development in these south-east European countries and those in central Europe and the Baltics is a matter of growing concern: not only because of the heavy costs to the peoples of south-east Europe but also because of the risks to economic and political stability in the region as a whole.

A major feature of the recovery in central Europe is the rapid growth of the industrial sector. Industrial output in Hungary and Poland grew more than 11% in 1997 and by some 7% in Croatia, in Latvia it was more than 6% and over 13% in Estonia. Thus, far from developing a post-industrial economy dominated by services, most of the east European transition economies seem to be embarking on a process of reindustrialization with a strong export orientation.

Despite high rates of economic growth, there was only a marginal rise in the total level of employment in eastern Europe in 1997, and this was largely due to Poland where output has been growing strongly for five years. Unemployment rates remain high. In spite of serious setbacks in some of the south-east European economies, inflation rates have fallen markedly in most of the transition economies in the last few years, although progress was less marked in eastern Europe in 1997. The rate of increase in wages has continued to fall and widespread improvements in productivity, largely associated with increased output, have considerably lowered the growth in unit labour costs.

In the CIS the most significant macroeconomic development in 1997 was the apparent end of seven years of falling output in Russia. The increase in GDP was marginal and the prospects for continued recovery are uncertain, but there are nevertheless signs of

improvement in various parts of the economy. The main source of growth was in manufacturing industry with a recovery taking place in a number of sectors.

TABLE 2.1.2

Basic economic indicators for the ECE transition economies, 1995 to 1998
(Rates of change and shares, per cent)

	GDP (growth rates)					Industrial output (growth rates)			Inflation (per cent change, Dec./Dec.)			Unemployment rate (end of period, per cent)		
	1995	1996	1997		1998	1995	1996	1997	1995	1996	1997	1995	1996	1997
			Ex-ante forecast	Actual outcome										
Eastern Europe	6.1	4.1	3.5	2.9	4%	7.7	6.5	5.6	..	..	..	12.5	11.8	11.7
Albania	13.3	9.1	..	-7	10	-7.2	13.6	-5.6	6.0	17.4	42.0	13.1	12.1	14.9
Bosnia and Herzegovina ^a	..	..	..	..	..	60.8	87.3	35.1	-34.2	3.2	12.2	..	..	..
Bulgaria	2.9	-10.1	-(2-4)	-6.9	3	4.5	3.8 ^b	-7.0	33.0	311.1	578.7	11.1	12.5	13.7
Croatia	6.8	6.0	5.5	6.5	7.5	0.3	3.1	6.8	3.7	3.5	4.0	17.6	15.9	17.6
Czech Republic	6.4	3.9	4.5	1.0	1.4-2.6	8.7	2.0	4.5	7.9	8.7	9.9	2.9	3.5	5.2
Hungary	1.5	1.3	2	4.4	4	4.5	3.4	11.1	28.5	20.0	18.4	10.4	10.5	10.4
Poland	7.0	6.1	5.6	6.9	5.6-5.8	9.7	8.3	10.8	22.0	18.7	13.2	14.9	13.2	10.5
Romania	7.1	3.9	-2	-6.6	-	9.4	9.9	-5.9	27.7	56.8	151.7	9.5	6.6	8.8
Slovakia	6.9	6.6	6	6.5	5	8.3	2.4	2.7	7.4	5.5	6.5	13.1	12.8	12.5
Slovenia	4.1	3.1	4	3.8	3.5-4	2.0	1.0	1.0	9.0	9.0	8.8	14.5	14.4	14.8
The former Yugoslav Republic of Macedonia	-1.2	0.7	..	1.0	5	-10.7	3.1	1.6	11.2	0.3	4.5	37.2	39.8	42.5
Yugoslavia ^c	6.1	5.9	13	7.4	10	3.8	7.5	9.5	110.7	59.9	10.3	24.7	26.1	25.6
Baltic states	2.3	4.1	4.5	7.4	6%	1.3	4.8	5.6	..	..	..	6.5	6.4	6.3
Estonia	4.3	4.0	4.5	11.4	5.5-6	1.9	3.4	13.4	28.8	15.0	12.3	5.0	5.6	4.6
Latvia	-0.8	3.3	3.5	6.5	5-6	-3.7	5.5	6.1	23.3	13.2	7.0	6.6	7.2	6.7
Lithuania	3.3	4.7	5	5.7	7	5.3	5.1	0.3	35.5	13.1	8.5	7.3	6.2	6.7
CIS	-5.5	-3.4	..	1.0	1%	-5.9	-2.8	2.3	..	..	..	5.8	6.2	6.2
Armenia	6.9	5.8	..	3.1	5-6	1.5	1.2	0.9	32.0	5.6	21.8	8.1	9.7	11.0
Azerbaijan	-11.8	1.3	..	5.8	..	-17.2	-6.7	0.3	84.5	6.8	0.3	1.1	1.1	1.3
Belarus	-10.4	2.8	5	10.4	7-8	-11.7	3.5	17.6	244.2	39.1	63.4	2.7	4.0	2.8
Georgia	2.6	8.6	..	11.3	11-13	-9.8	7.7	8.1	57.4	13.6	7.3	3.4	3.2	2.6
Kazakhstan	-8.2	0.5	2	2.0	3.5	-8.2	0.3	4.0	60.4	28.6	11.3	2.1	4.1	3.9
Kyrgyzstan	-5.4	7.1	..	10.4	3.6	-17.8	8.8	46.8	31.9	35.0	14.7	3.0	4.5	3.1
Republic of Moldova ^d	-1.9	-7.8	5-7	1.3	3-3.5	-3.9	-6.5	-2.3	23.8	15.1	11.1	1.4	1.5	1.7
Russian Federation	-4.1	-3.5	0-2	0.8	0-0.5	-3.3	-4.0	1.9	131.4	21.8	11.0	8.9	9.3	9.0
Tajikistan	-12.4	-16.7	..	1.7	..	-13.6	-23.9	-2.5	2 382.2	40.6	159.9	1.8	2.4	2.8
Turkmenistan	-7.7	0.1	..	-20*	..	-6.4	17.9	-35*	..	..	..	..	..	..
Ukraine	-12.2	-10.0	..	-3.0	0.5	-12.0	-5.1	-1.8	181.7	39.7	10.1	0.6	1.5	2.8
Uzbekistan	-0.9	1.7	..	5.2	6	0.1	6.0	6.5	..	..	..	0.3	0.3	0.3
Total above	-1.3	-0.4	..	1.9	2%	-1.7	0.4	3.5	..	..	..	7.5	7.8	7.8
Memorandum items:														
CETE-5	6.0	5.0	4.5	5.5	4.7	8.5	6.1	8.9	..	..	..	12.0	11.3	9.9
SETE-7	6.2	2.1	..	-2.9	3.3	5.8	7.6	-2.6	..	..	..	13.7	12.8	14.2
Ex-GDR Länder	5.2	1.9	1.0	1.6	..	5.8	4.3	5.0	..	..	..	..	..	..

Source: National statistics, CIS Statistical Committee and direct communications from national statistical offices to UN/ECE secretariat (IMF and World Bank data for Albania).

Note: Aggregates are UN/ECE secretariat computations, based on previous period weights at 1992 prices. Output measures are in real terms (constant prices). Forecasts are those of national conjunctural institutes or government forecasts associated with the central budget formulation. Industrial output refers to gross output, not the contribution of industry to GDP. Inflation refers to changes in the consumer price index. Unemployment generally refers to registered unemployment at the end of the period (with the exception of the Russian Federation where it is the Goskomstat estimate according to ILO definition and Estonia where it refers to job seekers). Aggregates shown are: *Eastern Europe* (the 12 countries below that line), with sub-aggregates *CETE-5* (central European transition economies: Czech Republic, Hungary, Poland, Slovakia, Slovenia) and *SETE-7* (south European transition economies: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Romania, The former Yugoslav Republic of Macedonia and Yugoslavia); *Baltic states* (Estonia, Latvia, Lithuania); *CIS* (12 member countries of the Commonwealth of Independent States); and *total transition countries*.

^a Data reported by the Statistical Office of the Federation; these exclude the area of Republika Srpska.

^b Bulgarian industrial output indices were recently recalculated according to a new methodology and old series reportedly have been revised back to 1991. Here and in appendix table B.4 the industrial output indices now cover gross output of all activities of industrial enterprises (and not gross output of "pure" industry, as previously published). The figure for industrial output growth in 1996 according to the new methodology (3.8 per cent) differs significantly from the figure for the rate of change of gross industrial output (-9.1 per cent) reported in the national accounts for the same year.

^c Gross material product instead of GDP.

^d Excluding Transnistria.

There was also a revival of consumer demand for the first time since 1990 and Russian manufacturers appear to be starting to regain shares in their domestic market. One of the major achievements in the Russian economy has been the reduction in the inflation rate from an annualized quarterly rate of 400% in early 1995 to 2.8% in the last quarter of 1997.

Output was also growing in all the other CIS countries in 1997 except Turkmenistan and Ukraine, and there was also a significant fall in inflation rates in most of them. Tight monetary policies and stable exchange rates were largely responsible for the latter, although higher productivity, and increased price stability in Russia, the principal trading partner of the other CIS countries, also had an influence.

(ii) Diverging performance and increasing instability: the global context in summer 1998

Developments in the first half of 1998 were marked by the contrast between a deepening economic crisis in East Asia and a continuing economic upswing in the western market economies and the transition economies. In East Asia, the economic and social costs of adjustment to be faced after the turbulence in the financial markets have become more visible in 1998. A significant deterioration of the economic situation in Japan, which moved into deep recession, and the associated sharp depreciation of the yen have seriously dampened prospects for recovery in the region, however.

In North America, the economic expansion has continued at a high rate. In western Europe, the cyclical recovery has continued at a moderate pace. Rough estimates suggest that real GDP in western Europe rose by some $\frac{1}{2}$ to $\frac{3}{4}$ of a percentage point in the first quarter of 1998 compared with the preceding quarter, when there was an increase by 0.5%. This would imply an average year-on-year increase of some 3%.

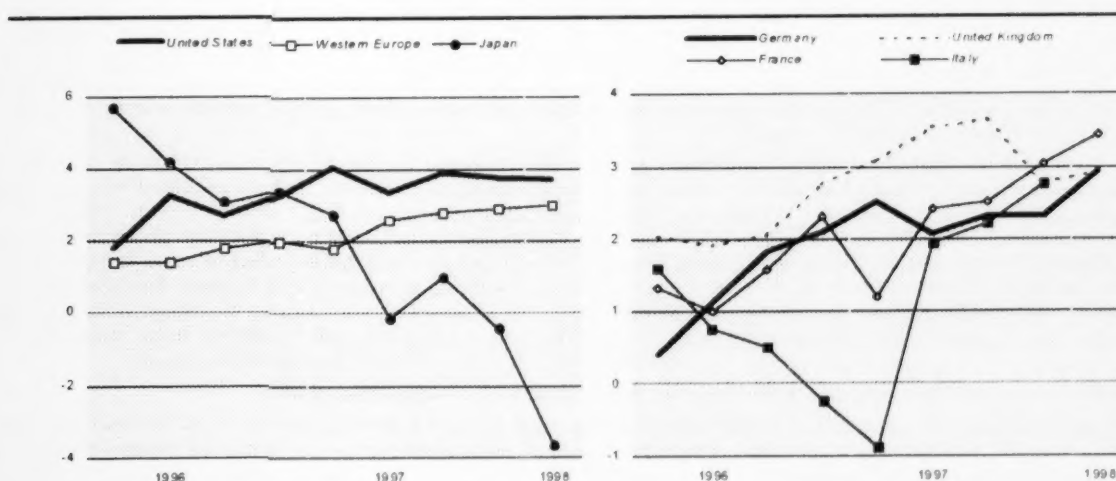
Economic developments have also, in general, been favourable in the transition economies, but they are still vulnerable to financial instability as a result of large domestic or external imbalances, real currency appreciation, weak banking systems, and relatively high exposure to short-term capital inflows. The recent financial turmoil in Russia, which erupted in May 1998, is an illustration of these risks.

In the foreign exchange markets the progressive appreciation of the dollar against the yen, underway since April 1995, has continued. Against the background of a marked weakening of economic activity in Japan, concerns over the problems in its banking sector and sizeable interest differentials in favour of dollar denominated financial assets, the selling pressure on the yen mounted considerably.

The collapse of the yen exchange rate constitutes a major change in the economic environment facing the east Asian emerging economies, because it has progressively eroded, in combination with a sizeable inflation differential vis-à-vis Japan, the price

GRAPH 2.1.1

Quarterly changes in real GDP, 1996 Q1 to 1998 Q1
(Percentage change over same period of preceding year)



Source: National statistics.

Note: Western Europe: Belgium, Denmark, Finland, France, Germany, Italy, the Netherlands, Norway, Spain, Sweden, Switzerland and the United Kingdom.

competitiveness which they had gained from the depreciations of their currencies in the second half of 1997 and in early 1998.

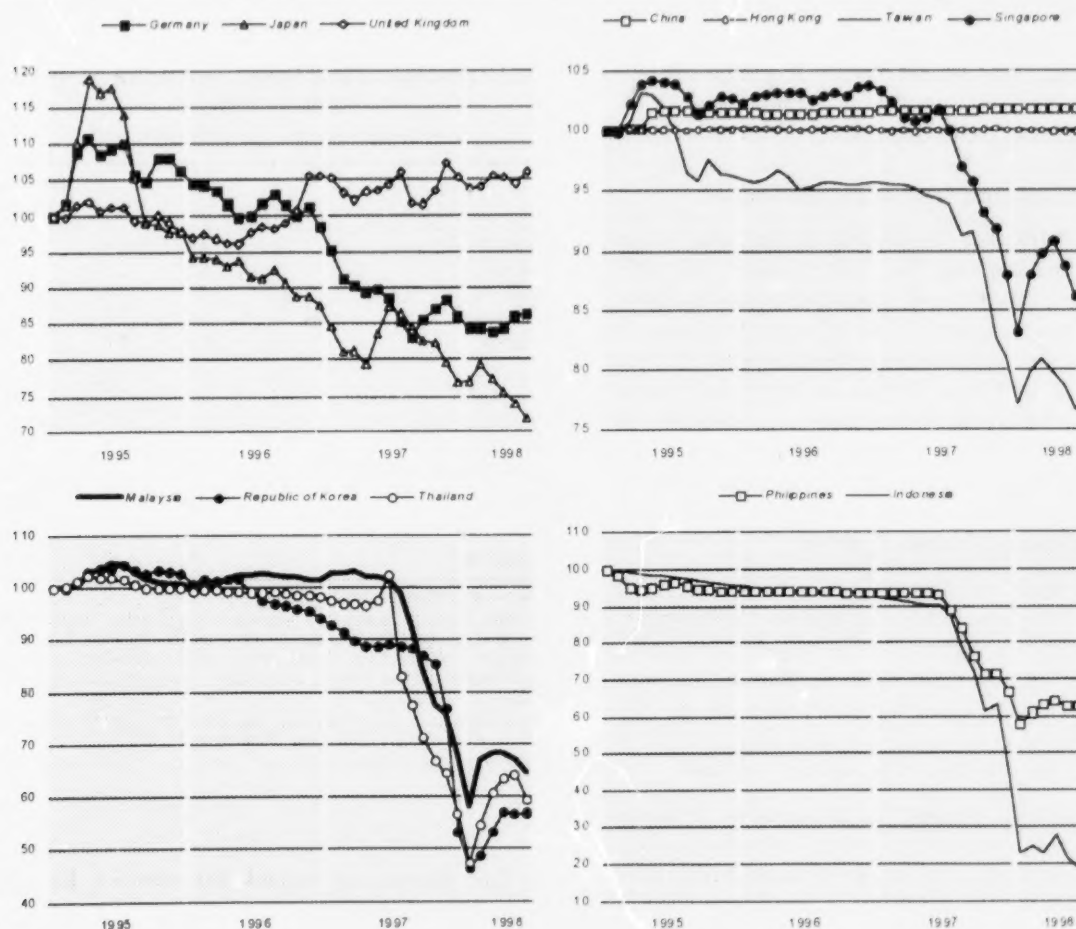
Share price indices in western Europe and the United States rose to record levels in the second quarter of 1998, but there was increasing volatility in May, which was partly related to the political turmoil in Indonesia and to temporary concerns over possible interest rate increases in the United States. This led also to selling pressure on share prices in emerging markets in Latin America and the transition economies. There was renewed volatility in early June against the background of the sharp depreciation of the yen, which was seen as a possible trigger of a new

round of currency depreciations in the region

The decline of international commodity prices accentuated in the first half of 1998. This was partly related to the reduced demand originating in East Asia on account of depressed domestic activity levels, but increasing supplies of some commodities have also played a role. There has been a conspicuous fall in the price of crude oil, the world market price (Brent Crude) falling below \$14 per barrel in May 1998, some 30% lower than in the same month of the previous year. Oil producing countries agreed in March 1998 to cut output until the end of the year to reverse the slide, but the reductions appear to have been outpaced by the decline of demand.

GRAPH 2.1.2

Average monthly nominal exchange rates against the dollar, January 1995 to June 1998
(Indices, January 1995 = 100)



Source: Federal Reserve Bank of New York; IMF, *International Financial Statistics* (Washington, D.C.); Reuters Business Briefing online database.

Note: Dollars per national currency unit. Data for June 1998: average of first week.

(iii) Economic crisis in East Asia

In Japan, there has been a further significant deterioration of the economic situation, and the economy is now in deep recession. Real GDP fell by 1.3% in the first quarter of 1998 compared with the last quarter of 1997 when there had already been a fall of 0.4%. Economic activity had started to weaken significantly in the wake of the tightening of fiscal policy in April 1997 which, with hindsight, was premature. To this was added the restraining effects of the Asian financial crisis on regional export performance and the lingering balance sheet adjustment problems in the banking sector, which led to a tightening of lending standards. This last factor has made it difficult for small- and medium-sized enterprises to obtain credit. The collapse of some important financial institutions in late 1997 also depressed consumer and business confidence.

One factor hampering exports is the difficulties encountered in some countries in obtaining trade financing. Companies are having to cope with tight liquidity and high interest rates. It should also be recalled that the potential gains in price competitiveness from the sharp decline of the exchange rates are offset to a more or less large degree by the increased dollar cost of imported inputs.

Real GDP fell in several of the east Asian emerging markets in the first quarter of 1998 compared with the same period of the preceding year. Among the five countries most affected, the downturn was particularly pronounced in Indonesia (6.2%) and the Republic of Korea (3.8%), but aggregate output also fell in Malaysia (1.8%) and most probably in Thailand. For the Republic of Korea, this was the first quarterly decline of real GDP in 18 years and for Malaysia, in 13 years. In the Philippines, there was a sharp slowdown in economic growth.

In all these countries official forecasts for GDP growth in 1998 have been – or will be – significantly lowered. This is especially the case for Indonesia, where a fall in real GDP by more than 10% is now expected following earlier forecasts of a fall by 5%. Private forecasters expect also quite a sharp decline in real GDP in the Republic of Korea and Thailand.

In Indonesia, against the background of falling output, soaring inflation (the annual inflation rate was some 50% in May) and a steep rise in unemployment, the government was facing massive protests when it decided to raise administered prices of energy and transport in early May 1998. Although the authorities cancelled this decision, the protests continued and led to the resignation of the President and a change of government. Given the persistent political uncertainty,

the IMF suspended disbursement of the loan arranged in the context of the rescue package agreed in October 1997. The Indonesian rupiah, which had recovered somewhat in April, weakened sharply in May, falling to more than 11,500 rupiah against the dollar in early June. This corresponds to a depreciation of the rupiah by nearly 80% against the dollar since June 1997.

The expected negative effects of the east Asian crisis on net exports of western Europe and North America have only gradually started to appear and so far they have been offset by stronger domestic demand. In general, the western countries have so far mainly experienced the beneficial effects of the Asian crisis: falling inflationary expectations have put downward pressure on interest rates and this has supported domestic demand. Falling interest rates have also contributed to the rise in asset prices and, hence, household wealth, which has also been supporting private consumption expenditures.

TABLE 2.1.3
Annual changes in real GDP in east Asian countries,
1996 to 1998
(Percentage change over preceding year)

	1996	1997	1998 *	Memo item 1998-Q1 ^b
ASEAN-4	7.0	4.0	-7.4	..
Indonesia	8.0	5.0	-12.0	-6.2
Malaysia	8.6	7.8	-2.5	-1.8
Philippines	5.7	5.1	1.0	1.7
Thailand	5.5	-0.4	-8.0	..
NIEs	6.4	6.0	-1.6	0.1
Hong Kong	4.9	5.3	-2.0	-2.0
Republic of Korea	7.1	5.5	-6.0	-3.8
Singapore	6.9	7.8	1.0	5.6
Taiwan Province of China	5.7	6.8	5.0	5.9
China	9.7	8.8	6.0	7.2
Japan	3.9	0.9	-0.5	-3.7
Total above	4.7	3.5	0.7	..

Source: National statistics and UNCTAD.

Note: Growth rates of regional aggregates have been calculated as weighted averages of growth rates in individual countries. Weights were derived from 1996 GDP data converted from national currency units into dollars using purchasing power parities.

^a Forecasts. Country data supplied by the Division on Globalization and Development Strategies, UNCTAD.

^b Percentage change over same quarter of previous year.

(iv) The short-term outlook for western Europe and North America

Economic forecasts prepared in the spring pointed to a rather favourable development in western Europe and North America in 1998 and 1999. In western Europe, the dominant expectations are still for a steady, albeit moderate, strengthening of cyclical

forces; the current forecasts still point to an average annual growth of GDP in western Europe of 2¾%, but this may now be an upper estimate (see table 2.1.1). In contrast, in the United States the often anticipated cyclical slowdown ("soft landing") has yet to appear but is still expected to occur eventually; current forecasts for annual growth in the United States economy in 1998 are in general close to 3% but given the likelihood of a stronger than expected slowdown in export growth, the outcome could be nearer 2.7%. It was clear that these benign changes depended to a large degree on how serious the ramifications of the 1997 crisis in Asia would be and on the persistence of low inflationary expectations in the United States.

The economic crisis in East Asia, however, has deepened significantly in the first half of 1998. In the emerging economies of the region, the decline in output or the slowdown in economic growth, which is now forecast for 1998, is much larger than expected earlier. The east Asian crisis has also acquired a much larger dimension with the deep recession in Japan against the background of a persistent crisis in the banking sector. The recession in Japan, if not quickly reversed, will aggravate the economic crisis in the east Asian emerging markets and delay their recovery. In combination, these developments will also affect growth prospects in other parts of the world economy, notably the United States. Import demand in East Asia will be lower than expected as a result of depressed domestic demand, while the pressures to step up exports to other regions of the world economy will be accentuated. The adverse changes in export demand facing the western market economies will be aggravated by the marked weakness of international raw materials prices, notably of crude oil, as witnessed recently. This, in addition to the shortfall of demand from Asia, will depress the export revenues and domestic incomes of commodity exporting countries and, consequently, their demand for products from the rest of the world.

In the United States, the available data suggest that relatively strong growth continued in the second quarter, but the expansion is now only supported by the growth of domestic demand. Changes in real net exports are expected to exert a significant drag on domestic activity levels in the second half of 1998 reflecting the strong dollar and the trade effects of the Asian crisis. In addition, stockbuilding is unlikely to continue to support economic growth. Moreover, the growth of employment, which has been supporting aggregate income growth, cannot possibly continue for much longer without rekindling inflationary pressures, given the already very low unemployment rate. Thus, even without a tightening of monetary policy there is

likely to be a more or less strong slowdown in the pace of economic expansion in the second half of 1998.

A pronounced slowdown in output growth, however, could lead firms to revise downwards their profit expectations and, consequently, their investment expenditures. This will have negative ramifications not only for stock market prices but also for the situation in the labour market and the income prospects of private households. Household debt has risen to very high levels in the current expansion and any deterioration in the financial position of households is therefore likely to have a significant dampening impact on consumption expenditures and the growth of GDP unless offset by increases in government consumption or foreign demand.

In western Europe, the cyclical momentum associated with the strengthening of intraregional trade has so far helped to offset the negative effects of the Asian crisis. Long-term interest rates are close to historic lows, and fiscal policy has shifted to a broadly neutral stance. But net export growth will be affected by the deepening crisis in East Asia and by a slowdown in economic activity in North America and in developing countries outside Asia.

But there are also downside risks originating within western Europe. In the United Kingdom, the recent additional tightening of monetary policy has probably increased the risk of a "hard landing". A weaker than expected growth of domestic demand in the United Kingdom would then have negative repercussions for the other west European economies as well.

The concerted and massive intervention of the United States Federal Reserve and the Bank of Japan in the foreign exchange markets on 17 June 1998 has led to a substantial strengthening of the yen. The spot exchange rate against the dollar fell to about 137 yen, compared with an eight-year high of some 144 yen on the previous day. But the current relative stability in financial markets could well be short-lived if expectations of a significant policy shift in Japan are not being confirmed and strengthened in the near future.

(v) The transition economies: economic pattern in the first half of 1998

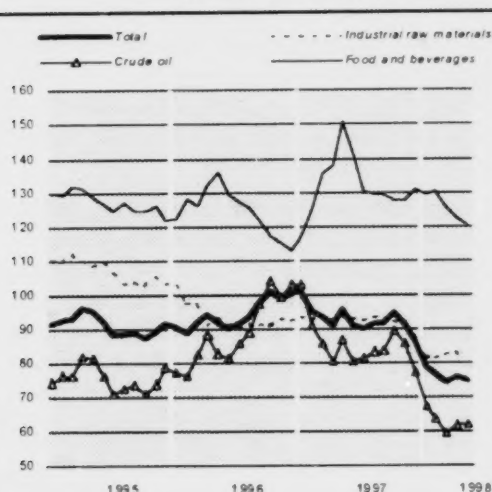
The positive trends which prevailed in most of these countries in the second half of 1997 have been maintained during the early months of 1998. Preliminary data for the first quarter suggest that output continued to rise in the transition countries as a whole and in all the main subregions as well. The performance of individual countries remains quite

heterogeneous, but there appears to be less variation among them in 1998 as compared with previous years.

Favourable demand conditions in western Europe have contributed to the continuing strength of economic performance in eastern Europe and in the Baltic region: total exports from these countries continued to rise strongly in the first quarter of the year. Rates of inflation continued to fall in most transition countries and there has been some improvement (or at least no further deterioration) in the external balances of some east European countries. However, the fall in world commodity prices in 1998 has had a negative impact on the export earnings of Russia and other CIS primary commodity exporters.¹

GRAPH 2.1.3

World commodity prices, January 1995 to May 1998
(Indices, 1990=100)



Source: Hamburg Institute for Economic Research (HWWA).

Note: Indices calculated on the basis of dollar prices.

Although on balance developments have remained positive in the first half of the year, economic performance in some countries has remained bleak and in others has been marked by considerable volatility. The most serious disturbance occurred in Russia which was shaken by financial instability in May-June. The shockwaves of this sudden turbulence were felt on all financial markets in central and eastern Europe and in the Baltic region. Neighbouring Belarus

was also hit by financial turmoil in March-April leading to a sharp drop in the exchange rate of the national currency. Economic performance in most of the south-east European transition countries has remained rather weak.

One of the important policy events in early 1998 was the formal opening by the European Union of the enlargement process towards central Europe. On 31 March, six applicant countries – the Czech Republic, Estonia, Hungary, Poland and Slovenia, together with Cyprus – officially started the process of pre-accession negotiations with the EU. Five other countries with association agreements with the European Union – Bulgaria, Latvia, Lithuania, Romania and Slovakia – are also formally involved in the enlargement process but substantive negotiations with them will only start at a later stage. The target of full EU membership – if pursued consistently – will set a rather rigid policy framework for the applicant countries during the pre-accession period leaving relatively limited degrees of freedom for deviations from this course.

The short-term economic outlook for the transition economies as a whole remains positive and it is likely that economic conditions in general will continue to be favourable in the second half of the year for the majority of these countries. Among the east European and Baltic countries, some further acceleration of growth can be expected in Hungary and possibly in Slovenia while the Estonian economy is likely to perform above official expectations. In contrast, economic decline is likely to continue in Romania and the output performance for the year as a whole may well turn out to be below the official zero growth target. The 10% growth target in Yugoslavia for 1998 is also unlikely to be met. Within the Commonwealth of Independent States, and despite the apparent improvement from previous years, there remain many uncertainties regarding the outlook for all the European CIS countries.

However, the greatest potential risks both for the CIS and for eastern Europe as a whole arise from the considerable uncertainty surrounding the economic situation in Russia. In view of the financial instability observed in the first half of 1998 and the subsequent substantial tightening of monetary and fiscal policy, the short-term growth prospects in Russia have deteriorated considerably. Official forecasts were already being revised downwards in the first quarter, but if instability and policy austerity continue, Russian GDP growth in 1998 may very well fall below these revised targets, and in the second half of the year there could even be a fall in aggregate output.

¹ In April 1998, copper, aluminium, nickel, zinc and lead prices were lower by 21, 11, 22, 17 and 8% respectively compared with their 1997 averages. Also, the oil price was hovering around \$13.5 a barrel in April compared with an average price of \$19.3 in 1997 – a decline of 30%. IMF, *Primary Commodity Prices*

(<http://www.imf.org/external/np/res/commmod/index.htm>).

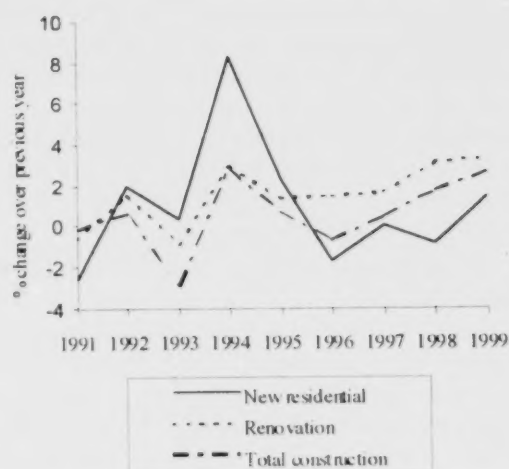
2.2 Developments in the construction sector

(i) The construction sector in Europe and the CIS

The construction sector in each country is often influenced by national, even local, factors, so that there is a wide variation in rates of change between countries. Nevertheless, it is clear that the European *new residential sector* has not yet emerged from a long period of stagnation or even contraction in some countries (graph 2.2.1). The major exception to this, the strong growth in the European total in 1994/95, was due to the post reunification building boom in Germany, the largest market, and hardly affected most countries. EUROCONSTRUCT² data show no change in the total level of activity for new residential construction in 1997 in the 14 countries covered (most of western Europe), with drops in three of the four major economies (France -2.2%, Germany -3.1%, Italy -7.9%), counterbalanced by strong growth in the United Kingdom (+9.2%, after two successive declines), and very strong increases in Denmark,

GRAPH 2.2.1

Change in construction activity by sector,
1991 to 1998 and 1999



Source: EUROCONSTRUCT, 1998.

TABLE 2.2.1

Developments in the construction sector, 1997 to 1999
(% change over previous year)

	New residential construction			Renovation		
	1997	1998	1999	1997	1998	1999
Austria	3.5	-1.3	-1.9	2.5	3.0	4.6
Belgium	4.9	4.0	4.5	4.1	4.0	4.5
Denmark	24.0	10.0	5.0	0.1	1.9	1.9
Finland	36.0	10.0	10.0	10.1	6.4	4.0
France	-2.2	1.3	2.4	0.5	2.2	1.9
Germany	-3.1	-2.9	1.8	1.1	2.3	2.0
Italy	-7.9	-8.9	-5.8	1.9	3.9	6.0
Netherlands	7.9	0.0	-3.0	2.1	2.3	2.5
Norway	24.2	7.9	4.4	7.3	3.7	-0.3
Portugal	12.0	8.0	6.0	4.1	5.1	4.8
Spain	6.0	3.5	2.0	6.4	6.5	5.0
Sweden	-19.2	8.0	26.0	-3.3	3.0	2.4
Switzerland	-8.0	-3.5	1.0	-2.6	2.1	2.8
United Kingdom	9.2	1.6	2.7	1.3	3.5	3.7
EUROCONSTRUCT area	0.0	-0.9	1.4	1.6	3.1	3.3
Czech Republic	15.4	12.0	18.8	-9.4	-6.4	-5.0
Hungary	0.0	4.0	5.0	5.0	7.0	10.0
Ireland	14.8	8.3	2.8	0.1	2.6	2.5
Poland	10.0	7.5	15.0	-7.2	-8.1	-2.1
Slovakia	17.7	20.5	15.0	5.0	4.8	9.5

Source: EUROCONSTRUCT (<http://www.euroconstruct.com/project.htm>)

² EUROCONSTRUCT is a consortium of research institutes specializing in the construction sector who monitor developments at regular (twice a year) meetings. More information is at <http://www.euroconstruct.com>.

Finland, Norway and Portugal. Three of the four transition countries covered by EUROCONSTRUCT show growth rates in new residential construction of over 10% in 1997 (table 2.2.1).

The picture is similar for 1998, with further contraction expected in Germany and, above all, Italy (-8.9%), with moderate growth in France and the United Kingdom. The Nordic countries expect rather healthy growth around 10% in 1998. The situation is expected to improve further in 1999, with negative growth only in Austria, Italy and the Netherlands, weak recovery in Germany and continued growth in the transition countries.

Through most of the 1990s, *renovation* has shown faster growth rates than any other part of the construction sector, and now accounts for about 34% of total construction expenditure. Furthermore the differences between countries are smaller, as renovation expenditure appears to be less vulnerable to cyclical factors. In 1997, in the 14 EUROCONSTRUCT countries, expenditure on renovation was 1.6% higher than in 1996, with drops only in Sweden and Switzerland. Germany recorded an increase of 1.1%. However, among transition countries, fairly steep drops were recorded by the Czech republic and Poland. Stronger growth was expected in 1998, across all western European countries, for an average rate of increase of 3.1%, with a rather similar forecast for 1999. As forest products, which are relatively light and flexible, have a competitive advantage in many renovation uses, the continued strength of the renovation sector is a major positive factor for consumption of forest products in Europe.

In Russia, the condition of the construction sector in 1998, according to Oxford Analytica³, remains poor, with volumes falling and the financial state of many construction enterprises weak, reflecting the decline in investment generally. Most construction is now undertaken by the private sector (e.g. 87% of new housing completions).

Construction volumes in Russia continue to contract, by 14.5% in 1996 and 6.4% in 1997, although localised construction booms are under way in some places, most notably Moscow. One cause of the decline is the reduction of public funding, but the main influence is the overall decline in investment, and the high interest rates.

Most medium- and large-scale construction enterprises are in difficult financial positions (although the black economy plays an important role in the

Russian construction sector, as in other countries). In the early months of 1998 the proportion of loss making enterprises, roughly unchanged from a year earlier was 43%.

Industrial, road and other non-housing construction is performing better than new residential building, dropping marginally, or even rising in the case of investment in industrial construction, while investment in "non-productive objects" (mainly housing) fell by 11.5%, although the level of output may be underestimated because of the black economy.

New, higher quality construction methods, using steel and reinforced concrete, are replacing the traditional Soviet era, concrete panel construction. The consequences of this for patterns of consumption of forest products are not clear.

(ii) The construction sector in North America

In the United States, housing starts have fluctuated around (or slightly below) the 1.5 million units/year mark since early 1994. This has corresponded with the long period of sustained growth of the United States economy, and contrasts with the early 1990s when for one year housing starts were barely above 1 million units⁴. Satisfactory levels of disposable income, low real interest rates and the feeling of confidence engendered by the long expansion all contributed to maintaining this situation. From autumn 1997, starts rose even higher, to an annual rate in March 1998 of 1.57 million units, although in April, this rate fell slightly, to 1.54 million units. In 1997, 77% of starts were in structures with one unit, the most intensive users of forest products. This proportion has remained roughly constant since the early 1990s. Thus, although an economic "soft landing" is expected some time in 1998, there is as yet, no sign of its coming to the housing market. The continuing strength of United States housing starts has been the backbone of the firm market for sawnwood and panels in North America over the period covered by this review.

1997 was a record year for Canadian housing starts, which, under the influence of low mortgage rates for most of the year reached 147 thousand, nearly 18% more than in 1996. In May 1998 the Canada Mortgage and Housing Corporation forecast further rises for 1998 and 1999, to 156 and 161 thousand units respectively (successive rises of 6.3% and 3.4%). However results for May and June showed a downturn, attributed to technical factors, notably

³ Daily Brief on Eastern Europe, circulated by Internet.

⁴ To put this in perspective, it should be recalled that United States housing starts briefly went over 2 million units/year in the late 1970s.

labour disruptions. According to the CMHC spokesman in July 1998 "main market indicators point to higher residential activity", although June starts were at an annual rate of 133 thousand units (table 2.2.2).

TABLE 2.2.2
North American housing starts, 1995 to 1998
(in thousand units)

	1995	1996	1997	1998 (forecast)
Canada	111	125	147	156
United States	1354	1477	1474	1540

Note: For 1998, for Canada, the forecast is by CMHC, and for the United States is the annual rate in April.

Sources: Canada Mortgage and Housing Corporation, and United States Bureau of the Census, 1998.

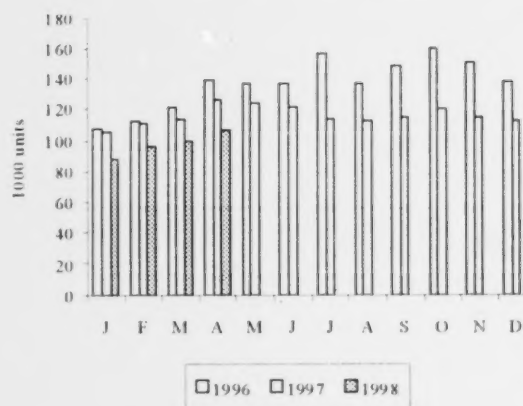
(iii) The construction sector in Japan

The weakness of the Japanese housing market was one of the major features of global forest products markets in 1997. The causes were multiple: domestic demand fell in general, as did fixed investment. Households had brought forward expenditures in anticipation of an announced rise in sales taxes in April 1997. There was therefore a sharp drop in spending in the second quarter of 1997. This coincided with major problems in the banking sector, making banks more restrictive in their lending, and shortly after the currency/banking/political crisis in other Asian countries. Taken together, this represented not only cyclical economic events, but also a major crisis of confidence in the Japanese system, which had brought about sustained growth over a long period. It is for this reason that the decline in housing starts, which in relative terms is much less brutal than recent events elsewhere (for instance in the transition economies) had such a strong influence on market behaviour. Another factor was the length of the crisis in the Japanese housing sector: in April 1998, housing starts were below those of the same month in the previous year for the sixteenth month in a row, something which had not been observed for decades.

Housing starts in 1996 were at the record level of 1.64 million units, fuelled by the rush to start houses before the imposition of the sales tax. The monthly data show quite clearly that it was in March/April that the 1997 results started to diverge from those of a year before (graph 2.2.2). This gap grew steadily over the following months. The 1997 results show 1.39 million units, combining the strong first quarter with a weak

rest of the year. The annualized rate for 1998, on the basis of figures for the first quarter are about 1.3 million, but these must be considered tentative, in view of the major uncertainty about economic trends. An aggravating factor for market confidence was that successive forecasts of imminent recovery in the housing sector proved unjustified. In the circumstances it is hardly surprising that importers of forest products imported cautiously and did everything possible to reduce stocks. The continuing decline in the yen, and the consequent increase in the cost of dollar denominated imports, also reduced the confidence of Japanese importers.

GRAPH 2.2.2
Monthly housing starts in Japan, 1996 to 1998

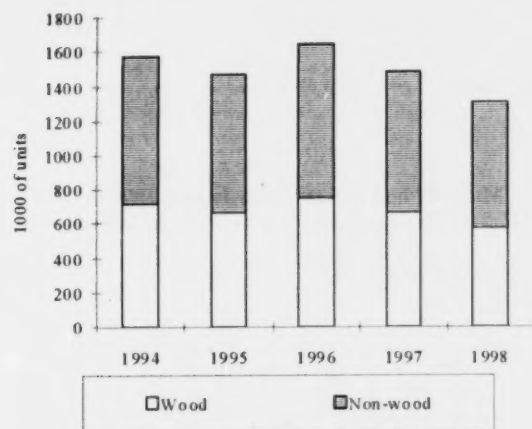


Source: Japan Wood-Products Information and Research Center, 1998.

The share of wooden houses in the total remained roughly constant, around 45% of the total (graph 2.2.3).

GRAPH 2.2.3

Japanese wooden versus non-wooden housing construction, 1994 to 1998



Note: 1998 forecast based on annualised rate from first quarter 1998.

Source: Japanese Ministry of Construction, 1998.

2.3 Developments in the furniture sector

This section is based on a "special topic" prepared by CSIL in the *FESYP Annual Report*.

Furniture production is a major end-use for wood-based panels and sawnwood, so trends in this sector are a component of demand for these products. Furthermore, although there is an obvious link between furniture and construction, the connection is not direct, notably because furniture is traded internationally, and may be replaced quite frequently during a building's life.

From the point of view of consumption of forest products, it is necessary to focus on production (rather than consumption) of furniture.

About 35% of world furniture production is in the western European market economies, 20% in the United States and 10% in Japan. The four largest European furniture producers are Germany (27% of European production), Italy (24%), France (11%) and United Kingdom (10%). Italy is the world's leading furniture exporter. The relative importance of German furniture exports has tended to decrease as German manufacturers have located production facilities in

eastern Europe, where production costs are lower, rather than exporting from Germany itself.

National furniture industries show some specialisation, e.g. Germany for kitchens and Italy for upholstered furniture.

The rather strong European growth in GDP in 1997 was driven by export demand and to a lesser extent by investment in machinery, and so did not convert into increased demand for furniture. For the second successive year, according to CSIL, there was a slight drop (-0.3%) in European furniture production, although an increase of just over 2% is forecast for 1998.

In 1997, furniture production rose modestly in France and Italy, and by over 4% in the United Kingdom, but fell by 3% in the largest producer, Germany, because of a shrinking domestic furniture market. German exports fell and imports rose partly because of the above-mentioned policy of relocating manufacturing facilities in lower cost regions.

CHAPTER 3

CERTIFIED FOREST PRODUCTS MARKETPLACE¹

Highlights

- There are several active certification schemes in the ECE region and many more under development.
- The only third-party, performance-based scheme with products apparent in the marketplace is that from the Forest Stewardship Council.
- Offering certified products can increase access to markets.
- There appears to be little consistency in the ability to gain premiums.
- The majority of Forest Stewardship Council certified forestland is in Poland, Sweden, and the United States.
- Forest Stewardship Council certified land area has more than doubled during the past year to approximately 10 million hectares by June 30, 1998.
- Most demand for certified products is from a growing number of buyers' groups.
- A true picture of the marketplace is difficult to construct due to lack of statistics.
- Final consumers are not currently a significant influence in the marketplace.
- The industry trading in certified products is underdeveloped with key gaps in its infrastructure.

Forest certification is one element of the larger discussion surrounding sustainable forestry. During the past several years, certification has been closely followed by the Timber Committee. In October 1994, a team of specialists was organized to assess the status and direction of forest certification. The report from the team of specialists was published in July 1996 (21)².

During the 55th session of the Committee in the fall of 1997, forest certification was a special topic and several outside speakers presented information on developments in certification and the marketplace (19). The Committee expressed a high level of interest in continuing to follow certification developments in the ECE region. This chapter outlines developments in certification schemes and the present state of the marketplace.

¹ This chapter was written by Dr. Eric Hansen (Assistant Professor of Forest Products Marketing, Oregon State University Department of Forest Products, 105 Forest Research Lab, Corvallis, Oregon, United States, 97331-7402, hansenen@fpl.orst.edu). The secretariat wishes to express its gratitude to Dr. Hansen for his major contribution to the understanding of this complex topic.

² (All reference numbers refer to citations found at the end of the chapter.)

3.1 Introduction

When discussing forest certification, it is important to have a common understanding of the three basic forms. First-party certification is an internal assessment by an organization of its own practices, second-party certification is an assessment by a customer or outside trade association, and third-party certification involves an assessment by a neutral, third-party, based on a set of accepted standards (13,10).

Another important concept is the difference between performance-based schemes and systems-based schemes. In a performance-based scheme the organization and land base being evaluated must meet specific thresholds of performance. A systems-based approach only requires an organization to have management systems in place designed to recognize the company's impact on the environment, monitor those impacts, and improve performance.

Typically, third-party, performance-based systems include the option of an on-product logo or ecolabel. This label is specifically designed to communicate with final consumers about various aspects of the product. For example, the ecolabel created by the Forest Stewardship Council (FSC) is designed to communicate that the product comes from a well-managed forest.

3.2 Forest certification schemes

There are a multitude of schemes or initiatives being developed in the ECE region with a goal of documenting and improving forest management. For example, Finland, Sweden, and Norway have each been working on their own systems and created the Nordic Forestry Certification project to coordinate information sharing and harmonization. A number of other countries, including most of those in western Europe, are also working to develop schemes. Four examples of currently operational schemes are detailed below. The basic elements of each scheme are shown in Table 1. An ECE discussion paper planned for late 1998 will further document the status of various schemes under development.

(i) American Forest & Paper Association's Sustainable Forestry Initiative

The American Forest & Paper Association (AF&PA) is the national association in the United States for the primary forest industries. Its members own approximately 90% of company-owned forestland in the United States and account for a majority of total paper and wood product outputs.

Officially begun in 1996, the Sustainable Forestry Initiative (SFI) is made up of a series of Implementation Guidelines, objectives, and performance measures and is a second-party certification scheme. Companies are required to participate in SFI to maintain association membership. As part of the commitment to SFI, members also work to educate loggers and non-company foresters to assure that sustainable forestry is practiced on non-company lands where roundwood and chips are sourced.

In early 1998, the Third Annual Progress Report on SFI was published. The report outlines the commitment and progress made by member companies. A panel of experts including academic, government, and nongovernmental organizations, reviewed the guidelines and progress made by member companies and gave it a positive evaluation along with suggestions for continued improvement. Although a number of companies chose to leave AF&PA rather than participate in SFI, the total land area under the program has grown to nearly 22 million hectares (3).

AF&PA is currently considering the need for SFI to provide a mechanism for third-party verification of member company practices and performance. This would mean a third-party auditing mechanism internal to SFI. A decision on this issue is expected by the fall of 1998. There is no discussion about modifying SFI to include an ecolabeling scheme.

(ii) Canadian Standards Association's Sustainable Forest Management System Standards

Canada has led development of a systems-based approach to sustainable forest management. Initiated by industry and developed through the Canadian Standards Association (CSA), two voluntary national standards (CAN/CSA-Z808-96 and CAN/CSA-Z809-96) were formally introduced in October of 1996. Z808 explains the design and implementation of a forest management system that includes environmental, economic, and social and cultural aspects and Z809 outlines auditing requirements for the program.

The Canadian approach to certification is based on the International Organization for Standardization's (ISO) 14001 environmental management system standards. In several areas it goes beyond the ISO standard. The standard incorporates a Canadian adaptation of the sustainable forest management criteria which were developed through the Montreal Process. It guides forest managers and public advisory committees through the refinement of the broad Canada-wide criteria into specific performance

objectives for the local defined forest area. The required third-party auditing process includes on-the-ground performance measures in addition to an audit of the management system (1). Companies performing audits must be accredited by the Standards Council of Canada.

A recent survey shows that at least 15 major Canadian forest products companies are implementing CSA standards on approximately 20 million hectares of forestland (2). However, no company has yet completed the process of becoming registered or certified in the system.

(iii) International Organization for Standardization 14001 and 14061

Subsequent to the UNCED conference in Rio de Janeiro in 1992, the International Organization for Standardization (ISO) began work to create a mechanism designed to support sustainable business development. In 1993, ISO Technical Committee 207 was formed to create the ISO 14000 series of environmental management standards (9).

During the process of developing the 14000 series, Canada and Australia unsuccessfully pushed for the development of standards specific to land management operations. However, ISO 14061, a guidelines document, has been developed to assist companies in applying ISO 14001 to forest management operations. Final touches are currently being incorporated and the 14061 document should be available from ISO by September 1998.

Only a few companies around the world have incorporated ISO 14001 into their forestry operations. According to Ghazali and Simula (16) five certifications of forest operations according to ISO occurred by late 1997 in Brazil, Sweden, Finland, and Indonesia.

(iv) Forest Stewardship Council

First proposed in 1990, the Forest Stewardship Council (FSC) was founded in 1993 in Toronto, Canada and has headquarters in Oaxaca, Mexico. The FSC development process was largely led by the World Wide Fund for Nature (WWF). WWF continues to support FSC in a variety of ways. FSC's Board of Directors is from three distinct interest areas: economic, social, and ecological. Each area is equally represented and there are rules to assure representation from the northern and southern hemispheres.

A key element of the FSC scheme is the incorporation of a logo or ecolabel. The label is designed to communicate to consumers that the product comes from a well-managed forest. If

ecolabeled products become common in the marketplace, consumers may develop a preference for them.

FSC accredits or approves organizations (certifiers) that wish to perform forest certifications according to its ten principles and criteria. Essentially this means that FSC is the certifier of the certifiers. To date, FSC has accredited a total of five certifiers, Scientific Certification Systems and SmartWood from the United States, SGS Qualifor and The Soil Association from the United Kingdom, and SKAL from the Netherlands.

FSC has developed ten principles and criteria for forest management designed to assure that consistent performance-based standards are used in evaluating forest management practices. Because the principles and criteria are broad and generic, FSC facilitates standards development processes in countries or regions around the world. Currently there are officially endorsed groups operating in six countries and another 20 following FSC frameworks without official endorsement.

The Swedish national standard was the first to be endorsed by FSC in January 1998. Standards development processes are designed to be participated in by a wide variety of stakeholders. This has been a challenge as shown by the withdrawal of the non-industrial private forestland owner organizations from the Swedish standard development process.

Harmonization of standards is also a challenge. For example, the United States has been divided up into 11 regions for the purposes of FSC standard development. FSC-United States must assure that the regional standards are roughly equivalent before they can be forwarded to FSC-International for approval. The international office must then work to harmonize the standards with others around the world.

The FSC has developed a method for group certification. The goal is to make certification economically feasible for non-industrial private forestland (NIPF) owners. The method is based on certifying professional land managers such as consulting foresters. The individual managers (or company) and management practices used are evaluated and a sample of managed lands are inspected. Providing performance requirements are met, the managers and lands are certified.

The FSC now has a policy regarding percentage-based claims. A percentage-based claim allows an assembled, fiber- or particle-based product to carry an FSC label even though only part of its wood fiber is from a certified source. The allowable split is at least 70% certified and no more than 30% uncertified, based

on *volume* for assembled products and *weight* for fiber- and particle-based products. The policy also allows up to 75% recycled or non-wood fiber in combination with 25% virgin fiber. At least 70% of the virgin fiber must be certified.

Although still small on a global scale, the area of FSC certified forests is growing quickly. The graph (graph 3.2.1) shows the progress in area certified from less than 1 million hectares at the end of 1995 to over 6 million at the end of 1997 and approximately 10 million in mid-1998.

The only third-party, performance-based scheme with products in the marketplace is the FSC. This chapter outlines the development of the marketplace for products originating from FSC certified forests.

GRAPH 3.2.1

FSC certified forest land, 1992 to 1998



Source: FSC-United States and FSC-International, 1998.

TABLE 3.2.1

Basic elements of example certification schemes

Scheme	Led By	Level	Application	Ecolabel
SFI	American Forest & Paper Association	2nd-party	United States	No
CSA	Canadian Standards Association	3rd-party audited, systems-based	Canada	No
ISO	International Organization for Standardization	Optional 3rd-party audited, systems--based	International	No
FSC	Primarily environmental, non-governmental organizations	3rd-party, performance-based	International	Yes

3.3 Why certification?

- Companies are increasingly incorporating environmental issues into their marketing strategies.
- Offering certified products can increase access to markets.
- Certification can enhance the credibility of company communications.
- Premiums are available in some sectors but are generally inconsistent.
- Extensive networking is often required to access supply and develop markets.
- Offering certified products appears to be improving company marketing strategies.

An increasing number of companies and landowners are choosing to certify their lands or buy and sell certified products. An awareness of the motivating factors behind their involvement is helpful in understanding the overall development of the marketplace.

(i) Marketing the environment

In recent years, environmental concerns have been prominent in the media, and are increasingly important throughout the world. A variety of issues have energized environmental groups, citizens, and political leaders to begin making changes.

Companies are often cited as a principal source of environmental problems. Consequently, they have been confronted with demonstrations, restrictive

regulation, and buyer boycotts (17, 24). European wood products retailers faced significant challenges to their operations during the tropical timber boycotts of the 1980s. The boycotts contributed to a loss in market share across a variety of industry sectors for tropical wood and may have contributed to a loss of share for all wood products in sectors such as windows.

As one way of dealing with these societal forces, companies have begun to incorporate aspects of the environment into their marketing strategies. A simple definition of environmental or "green" marketing is, gaining profit from identifying and providing for the wants and needs of consumers while recognizing and minimizing impacts to the environment. The use of forest certification in company marketing strategies is one example of a trend toward environmental marketing in the forest industry.

(ii) Market access

Certification may hold its greatest potential in providing entry into markets that companies have not previously operated in. With certified product offerings, companies have often found opportunities in totally new markets. For instance, Colonial Craft, a United States hardwood moulding and millwork producer, filled a small order of certified product for a new customer several years ago and has since become its sole-supplier. Although certified product is still a small proportion of the volume sold to this customer, the total order was worth several million dollars. Collins Pine, a small United States sawnwood producer, was able to sell certified pine shelving directly to a large retailer and certified white fir to a furniture company. Both of these were new markets for Collins Pine.

Swedish companies are beginning to see inquiries for certified forest products from glulam and other secondary forest products manufacturers. Small European importers and wholesalers have found that offering certified products gets them in the door to talk to buyers from big do-it-yourself (DIY) chains. Without certified products these small players are typically too small to gain the attention of corporate buyers. Those selling tropical wood in Europe claim that certification is often what allows them to successfully sell tropical wood in markets where any wood products from the tropics have largely gone out of favor.

(iii) Image

Generally, companies have experienced positive public relations from becoming involved with forest certification. As one of the first companies in the

United States to certify its forestland, Collins Pine received national media attention despite its relative small size and also received a Presidential Award for Sustainability. Even FSC certified resource managers in the United States have used their certified status to generate media exposure and positive public relations. Some companies feel that being seen as progressive and doing the right thing is critical for maintaining their company image. For example, a German contact said his company has a strong image with customers and a need to communicate with them about environmental issues in order to maintain that image. Retailers such as The Home Depot in the United States, Homebase in the United Kingdom, and Migros in Switzerland have received positive press for their commitment to purchasing certified products.

(iv) Credibility

Credibility is key to successful implementation of environmental marketing strategies. Since companies are rarely seen as credible sources of information, they face a challenge in implementing environmental marketing strategies. Certification is being used as a means to enhance the credibility of company communications. Swedish industry saw credibility when communicating with their customers as a critical advantage to becoming certified.

Public land managers in the United States hope certification and the evaluation by a set of outside experts will give citizens more confidence in their management decisions. Many proposed harvests on public lands in the United States have seen legal challenges in recent years. Managers also hope certification will lead to fewer legal challenges to timber harvests.

Part of the credibility of certification derives from the interaction among a wide range of stakeholders. Companies involved with certification are quite often working with environmental groups as partners rather than adversaries. This networking and cooperation is clearly advantageous for companies. One European retailer sees the affiliation with WWF through participation in a buyers' group as one of the most important aspects in making a commitment to purchase certified wood. Since certification is supported by many environmental, non-governmental organizations, some companies have embraced certification because it minimizes the risk of being targeted by those groups.

(v) Premiums

Initially, supporters of certification claimed consumers would be willing to pay more for "environmentally preferable" products. A number of

studies investigated the willingness-to-pay of consumers and various industry sectors (e.g., 18, 20, 22, 23). None of these studies observed actual consumer behavior so it is difficult to conclude that the respondent's expressed willingness-to-pay would materialize in an actual buying situation.

In evaluating the nature of the marketplace it is critical to use a common definition of a premium. A premium results when a higher price is paid for a certified product than the exact same non-certified product. Often, claims about premiums result when products are processed differently or are sold for a higher price in entirely different markets.

Generally, companies have been unsuccessful in obtaining consistent premiums. Forsyth (15) interviewed 11 companies in the United States and Europe and found that six had paid premiums ranging from 5% to 20% for certified product and four claimed their customers had paid premiums ranging from 5%-10%. AssiDomän in Sweden is able to get around 6% more for certified sawnwood than for uncertified sawnwood of the same quality and \$20-30 more per ton for pulp in select European markets (15). One United States veneer manufacturer consistently pays a 10% premium for certified logs and at least part of the increased cost is recuperated through higher veneer prices.

Although companies may not be receiving consistent premiums, they are confident certification will differentiate them from their competitors and influence customer purchase decisions. One United States company claimed that without differentiation they would be doomed to the highly competitive commodity market dominated by large companies. One small wholesaler claimed that the real value of certification was in maintaining or improving market share. With a low margin product like sawnwood that has to be sold quickly and in volume, certification allows him to get the full margin more often.

(vi) Networking and improved marketing

Because the infrastructure for certified products is still being developed, companies are finding it necessary to network with suppliers and competitors alike. This is especially positive for small companies as they stand to benefit from interaction with peers. In this way they learn from each other and can co-develop markets conserving individual time and energy. Mid-sized companies see building alliances as one way to be more competitive with big companies.

Selling certified products has often required improved marketing skills. For example, sawnwood companies that have traditionally operated in a

commodity market, with a stereotypical commodity mentality have had to evolve. One United States sawnwood producer noted that you cannot sit and wait for the market to come. Pursuing non-traditional markets has required companies to listen to the needs of customers.

3.4 Status of supply

- Over 70% of FSC certified land is in Poland, Sweden, and the United States.
- Several fiber- or particle-based products recently debuted in the marketplace.
- Potential certification of United States federal government owned lands has become highly controversial.
- Newly certified land does not immediately equate to certified product on the market.

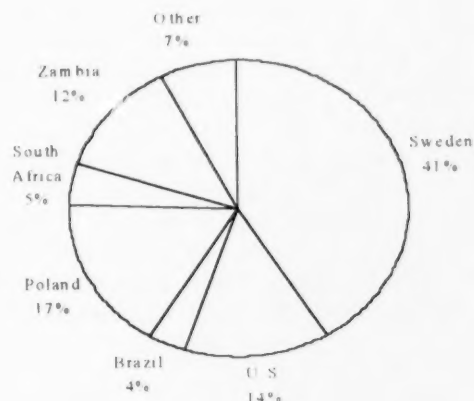
Ghazali and Simula (16) estimated total roundwood production from certified forests in 1997 to be 9.5 million m³. Certified land area has increased considerably since then and was approximately 10 million hectares as of June, 30, 1998 (14).

The graph (graph 3.4.1) shows where the current FSC certified forests are located and that Poland, the United States, and Sweden contain a majority of FSC certified land.

Several high profile certified products have hit the market during the past 12 months. Medium

GRAPH 3.4.1

Location of FSC certified lands, June 30, 1998



Source: FSC-International, 1998.

density fiberboard and hardboard from Brazil are now available in Europe. Bathroom tissue and wallpaper are being sold in the United Kingdom originating from pulp in Sweden. In the United States, a limited volume of softwood structural plywood was available and a small volume of particleboard was expected during 1998.

Fiber and particle-based products are a significant development because manufacturers of these products typically access raw materials from a large number of suppliers. Unless a large percentage of the fiber coming from those suppliers is certified, chain-of-custody becomes a significant challenge.

Although there have been large areas of forestland certified during the last year, this does not immediately equate to large volumes of product on the market. The processing and distribution infrastructure for certified products must develop before they can make it to market. Even when the certified land is owned by a large company with processing capabilities, the production of certified products is sometimes limited by mill self-sufficiency and costs associated with maintaining chain-of-custody requirements.

Although the FSC and certifiers carefully keep track of the area of land certified, they have not implemented a comprehensive system to quantify the volumes and types of certified products available in the marketplace. As there are no organizations systematically quantifying the trade of certified products, obtaining a complete, objective picture of the marketplace is impossible.

(i) Supply developments

The World Bank and WWF have agreed on a strategic alliance with one goal being the certification of a total of 200 million hectares of forest by the year 2005. According to Ghazali and Simula (16) this could mean about 6 percent of the world's production forests and around 600 million m³ of roundwood production annually. However, this project is still under development and will have few short term impacts on certified product supply.

The area of certified land in the *United States* increased considerably when public lands in two states were certified. Pennsylvania had over 485 thousand hectares of state lands certified and Minnesota over 236 thousand hectares of state and county lands. Both states are considering certification of additional areas which could amount to around 650,000 hectares. Other states are also becoming involved. The most developed process is in New York where approximately 283,000 hectares will be assessed in the

fall. The city of Sitka, Alaska has received a grant from the United States Environmental Protection Agency to study the feasibility of certification on state lands and land owned by native corporations.

Certification on federally owned lands in the United States has become very controversial. A small community in southern Oregon took the initiative to bring consideration of certification to a Sustained Yield Unit on the nearby Fremont National Forest. Several large United States environmental groups are opposed to timber harvesting on United States federal land. Though they may support certification in concept, they do not see it as appropriate for federal lands since it could facilitate harvesting. There is a moratorium on certification of federal lands for the remainder of 1998 while the issue is being resolved.

Resource manager certification is gaining momentum in the United States, though typically involving fairly small areas of land. Northern California and Oregon appear to be especially active. As in other sectors, the processing infrastructure presents a challenge. Certified managers find themselves spending considerable time trying to find a way to get a small volume of certified logs processed.

Since the approval of the Swedish National Standard there has been a huge area of land certified in *Sweden*. Nearly all of the area certified by the end of June 1998 belonged to three companies, AssiDomän, Stora/Enso, and Korsnäs. AssiDomän has the largest area of certified forestland at 2.6 million hectares followed by Stora/Enso with almost one million and Korsnäs with just over 660 thousand (14). According to a recent press release, AssiDomän now has all of its 3.3 million hectares of Swedish forest certified. Korsnäs also has all of its Swedish forestland certified while Stora/Enso has approximately half.

Poland and the *Czech Republic* both have certified forest land. The Czech Republic has a small area of just over 10 thousand hectares. Poland is a significant player worldwide with a total of 1.7 million hectares. This area is made up of four different regional state forests. Very little activity can be seen in other countries in transition.

Brazil and *South Africa* are the other two places where significant developments have taken place. The first certified medium density fiberboard and hardboard became available from Duratex in Brazil (4). Klavin Fabricadora de Papel e Celulose S.A. received certification of nearly 219,000 hectares of plantation. So far its chain-of-custody certification only covers the solid wood side of its business and not the paper side. Further certification of plantation operations in Brazil is expected in the near future.

South Africa now has over 360,000 hectares of certified plantations and products from those plantations are making their way into European markets.

3.5 Status of demand

- Demand is regional in nature and dominated by European buyers' groups.
- The true size of demand is difficult to estimate due to a lack of statistics.
- Governments at various levels are becoming involved through legislation and preference clauses in contracts.

Demand has been increasing in various markets and market sectors but is regional in nature and often segment specific. One indication of the infancy of the market is that there are as many players in the industry complaining about lack of demand as there are complaining about lack of supply. Coopers and Lybrand (11) estimated that demand in 2003 for certified material could amount to approximately 100 million m³. Demand appears to currently be concentrated in the United Kingdom, the Netherlands and Germany with some demand in the United States. Little interest is evident in southern Europe, the countries in transition, or Asia.

(i) Buyers' groups

The largest demand for certified products is currently a result of the formation of buyers' groups. Buyers' groups are companies that voluntarily join together and commit to purchasing wood and wood-based products that originate from well-managed forests. The primary players in these groups are typically large DIY retailers.

Most buyers' groups are organized by WWF. Member companies have a goal of improving forest management through evaluating and documenting supply sources and eventually insisting on buying certified wood products.

The United Kingdom 1995+ was the first to be developed, others currently operate in the Netherlands, Belgium, Austria, Germany, Switzerland, and North America. There are also groups planned in Australia, Brazil, Denmark, France, Greece, Ireland, Japan, Norway, Spain, and Sweden. Participation has been driven by a variety of factors including a corporate ethic of "doing the right thing", obtaining assistance in dealing with forestry issues, perceived competitive advantage, and risk aversion.

The market share that DIY represents within a country as well as the individual companies involved in a buyers' group have a significant impact on the ability of the group to influence the marketplace. In the United Kingdom, DIY is an important sector in the marketplace and the major DIY retailers are all participating in the 1995+ Group. As a result, they are able to heavily influence their supply chain. As they successfully obtain more certified products, their ability to move others towards offering certified products will increase.

Member companies and marketplace dynamics influence group success. For example, some central European markets like Switzerland are very committed to buying wood from local forests. Very little forestland is certified in those countries which severely limits product availability. Companies must then trade off their commitment to buy locally with their commitment to buy certified products.

In 1998, demand from buyers' groups is estimated to be around 9 million m³ of round wood equivalents and the total volume of certified timber traded in Europe around 2 million m³ (20). Brief information on the active buyers' groups is listed (table 3.5.1).

As the first buyers' group, the 1995+ Group in the United Kingdom is an important part of the certification story. It was formed to bring together companies committed to purchasing wood and wood-based products from well-managed forests. Members of the Group generally have a goal of selling 100% third-party certified forest products by December 31, 1999.

This group of companies has had an undeniable impact on the global forest products industry. Some of the members of the group have been very active in their efforts to access certified products even to the point of switching or threatening to switch suppliers. A recent statement from Homebase, Sainsbury's DIY division, stated that Indonesia and Canada were specifically considered questionable supply sources and the company would soon be switching to beech for stair parts as a substitute for British Columbian hemlock (12). Another DIY retail chain, B&Q, publicly threatened to drop Finnish suppliers unless they create concrete plans to provide FSC certified products. B&Q imports about 500,000 m³ of Finnish timber products (5). Similar threats have been made to their Canadian suppliers.

TABLE 3.5.1
Currently Operating Buyers' Groups

Country	Group Name	Founded	Members	Total Annual Member Sales (millions)
United Kingdom	1995+ Group	1991	87	\$69,000
Netherlands	Hart Voor Hout	1995	11	...
	Organizations committed to FSC	1992	473	...
Belgium	Club 1997	1994	79	\$270
Austria	Gruppe 98	1996	26	\$960
Germany	Gruppe 98	1997	31	\$12,000
Switzerland	WWF Wood Group	1997	10	\$170
North America	Certified Forest Products Council	1997	Businesses..	140
			Individuals..	500

Several 1995+ Group members have switched suppliers in order to access certified products. Changes from Southeast Asia to Central America, South America to Africa, Europe to South America, and even from one Nordic country to another have taken place. As the year 2000 approaches and the commitments of these retailers come due, the pressure to access supply is escalating.

(ii) Other sources of demand

Public entities in a number of countries have tropical wood bans in place and are moving to develop preferences for certified products. For example, in the United States, cities such as Los Angeles and San Francisco are working to incorporate preferences and even are considering paying premiums for certified products. The United States government in its preplanning for \$1.4 billion military base renovations project is pilot testing a buy green program. The text in the request for quotations included the term "certified wood", though it was unclear how certification was defined.

In February of 1998 the Lower Chamber of the Dutch parliament passed a bill that would require the labelling of wood indicating the sustainability of the source by the year 2000 (6). Basically any timber sold would carry a red or green sticker with red corresponding to timber from non-certified sources and vice versa. The bill has been passed on for consideration by the European Union and must still pass the Upper Chamber of parliament (7). It is questionable whether this will make it past European Union scrutiny, however, it is an indication of the

potential for government involvement in the marketplace.

There are companies outside of buyers' groups asking for certified products. Often small entrepreneurial operations, these companies typically operate in urban centers where they can access an affluent, "environmentally minded" consumer base. In the United States there are large, high-end retailers that have an interest in certified wood for the interiors of their new stores. Their demand is increasing interest down the supply chain.

A significant industry sector, the publishing industry in Germany has been prominent in the certification debate. Acting through the German Magazine Publishers Association, the industry cooperated with the German Paper Producers Association to produce a series of position papers and has called on their suppliers to play a part in a certification system that is recognized worldwide. However, they have made no commitments similar to those companies participating in buyer's groups. Still, the actions of this sector could have a significant impact on future demand for certified products.

3.6 Constraints to market development

- Final consumer demand is not yet a significant part of the picture.
- Lack of supply is a problem for many manufacturers and retailers.
- Mainstream industry is still hesitant to become involved.

- The industry trading in certified products is underdeveloped with key gaps in its infrastructure.
- Seeking premiums may hurt market development.
- Demand is often specific and fragmented.

Despite growth in markets for certified products there is a variety of factors that impede development. As an 'infant' marketplace, much of the infrastructure to process and deliver product to a wide customer base has yet to develop. Although the dynamics of each market and each product are unique, the following outlines some of the general difficulties faced in developing markets for certified products.

(i) Limited market demand

At this point in the evolution of markets for certified products, the final consumer is NOT a significant player. Despite public interest in forest management, there is limited evidence to indicate mass market demand for "responsibly-sourced" wood products. Very few consumers even know what certification is. The consumer market for certified wood products was less than 1% of total European consumption in 1997 (20). Even though certification has been a high profile issue in the industry for several years now, very few final consumers have been exposed to certified products or certification ecolabels.

Many advocates of certification feel that generating demand is a matter of educating the consumer. The DIY market in the United Kingdom will provide the first indication of mass consumer reactions to FSC labeled forest products. The FSC ecolabel are now fairly common in DIY retail outlets, the FSC ecolabel has received considerable press, and the United Kingdom buyers' group is considering an advertising campaign to develop demand.

A number of companies expressed that education and awareness by customers and eventually final consumers were necessary to further market development. One mid-sized, United States company claims that once a potential customer understands certification, selling the product is not difficult.

There is demand for certified products in a few key European countries. One softwood sawnwood supplier expressed concern that the market could grow too fast. If demand is consistently larger than supply, companies unable to access certified products could abandon their commitment to buy certified products, or worse, switch to non-wood substitutes.

There is often a gap between those who are demanding certified products and those who are in a

position to supply them. Companies in the lesser developed countries of the Americas have certified products but have had difficulties attracting buyers, though limited processing capabilities and species availability are partially responsible. Other evidence of this gap is that most companies are able to sell only a low percentage of certified products to customers specifically requesting them.

(ii) Lack of supply

Companies in various markets and levels of the supply chain cite lack of supply as their biggest challenge to market development. A strong supporter of certification in the United States says he cannot get wood. Due to lack of supply he has stopped pursuing markets for certified products and lost much of his enthusiasm. European retailers are anxiously awaiting the supply that can help them meet commitments made when joining buyers' groups. There is concern within the industry that if more supply isn't soon available, the market for FSC products could lose momentum.

(iii) Limited industry involvement

Generally, mainstream industry has been passive about or even resisted the trend toward certification. Despite this resistance, 75% percent of Finnish, 68% of British and 60% of German companies surveyed felt that a widely used certification system was needed (20). There is a variety of reasons for resistance to the FSC scheme including the costs of certification and uncertainty of cost recovery, the challenges associated with chain-of-custody, the uncertainties of regional standards development, and lack of significant market demand. Also, there is considerable confusion and misinformation about certification. This is especially true with chain-of-custody certification and percentage-based-claims policies. All of these factors, in addition to the infancy of the market, add up to an underdeveloped, inefficient marketplace with gaps in the infrastructure.

Those companies that are interested in buying and selling certified products are faced with a number of challenges. There is a limited volume of certified products available and few producers. Availability and consistency of supply are legitimate concerns at all levels of the industry ranging from wholesalers and retailers to home builders and architects. According to one United States contact, the consistency of supply is not there for secondary manufacturers yet. A United States wholesaler stated that even if production is happening, distribution is still a problem.

Chain-of-custody means that a certified product must have documentation proving it comes from a certified forest. Members of the distribution channel

must become chain-of-custody certified to show that they have a system in place to properly keep certified and non-certified products separate. Thus, certification can add complexity and costs. For companies involved in distribution it may be difficult to obtain enough product volume to justify allocation of separate floor space, storage, and other distribution resources. This suggests that large, vertically integrated firms with large areas of forestland should be especially well positioned to capitalize on certification.

Another important sector of the industry that opposes FSC-based certification is the non-industrial private forestland (NIPF) owners in Europe. The organizations representing the owners are generally opposed to FSC-based certification because they feel that FSC has not adequately taken the needs of NIPF owners into consideration. Generally, private forest owners in Finland and the United Kingdom anticipate few benefits from certification (20).

The withdrawal of the Swedish NIPF organizations from the FSC standards development process appeared to catalyze owner organizations around Europe. Some 500 owners gathered in Germany in November 1997 to demonstrate their opposition in front of a company's headquarters that supports FSC certification (8). The associations are now looking to develop an alternative certification system to FSC that is based on the criteria and indicators developed in the Pan European Process.

(iv) Difficulty with premiums

According to some in the industry, the pursuit of premiums is restricting market development. An example of this is in the United States hardwood plywood industry. In this industry, premiums are often paid all along the supply chain. By the time it gets to the final customer the plywood might be 50% more than its non-certified equivalent. This kind of price differential makes it difficult to grow a market.

On the other hand, if producers cannot get a premium they often see little incentive to becoming involved. Some producers question, and are even a bit cynical, about commitments to certified products made by European buyers. The producers feel like price is still the overriding factor.

(v) Fragmentation and specificity of market demand

Final consumers and secondary processors are accustomed to broad product ranges in species, dimension, grade, etc. Because supply is so undeveloped, producers often find it difficult to meet the specific demands of their customers. For example,

in the United States hardwood plywood industry, there is a limited number of thicknesses of certified core material available. This in turn means that the thicknesses of final products are also limited. Consequently, the companies currently offering certified hardwood plywood cannot offer a full range of options to their customers. United States hardwood sawnwood producers which are typically small in size have difficulty meeting large orders of a given species, dimension, etc. Even large producers of softwood sawnwood have experienced difficulties in providing the various lengths asked for by their customers.

The demand for certified products often centers on a narrow range of grades. This means that the producer might quite successfully develop a market for one grade, but be left with the others to find a market for. This is often the case in the veneer and hardwood sawnwood industries. Some suppliers are not offering lower grade certified products because they fear it could hurt the image of the FSC label.

Suppliers both large and small see orders that are too small to economically fill. When a large MDF manufacturer that normally deals in car loads or container loads is approached by a potential customer that wants "at least 50 pieces per year", the manufacturer simply cannot fill such a small order. Similarly, if a certified sawnwood manufacturer in the United States is approached by a homeowner in another state to supply certified sawnwood for one home, it is unlikely to be a profitable venture.

3.7 For the Timber Committee's consideration

Current trends suggest that certification in some form will be part of the forest industry for some time. As mentioned above, there are no sources of reliable, objective statistics regarding production, trade, and consumption of certified forest products.

Collection of specific statistics presents a considerable challenge since certified products are not distinguished from non-certified in traditional measurement mechanisms. The situation is further complicated by the number of certification schemes that are, or soon will be operational. The Timber Committee could consider how to best monitor developments in certification and the impact of those developments on markets for forest products.

Aspects which might be considered could include:

- Information needed to appropriately monitor developments in this growing market segment.

- Potential information sources (official, certifiers, associations, etc.).
- Questions of confidentiality.
- Methods of collecting information (regular official enquiries may not be the most effective method).

It is suggested that the Timber Committee consider at its September 1998 session whether and how a system to monitor these trends should be set up. It may wish to refer this matter to the Joint FAO/ECE Working Party on Forest Economics and Statistics, which will meet in summer 1999.

3.8 Literature cited

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CHAPTER 4

EFFECTS OF THE ASIAN CRISIS ON ECE REGION FOREST PRODUCTS MARKETS

Highlights

- The Asian crisis is being felt worldwide, in many sectors, including the ECE region's forest and forest industry sector.
- The entire forest and forest products sector has felt the shocks and by necessity, made initial strategic adjustments.
- Industries dependent on Asian trade have found alternative markets and cut production.
- Structural changes in economic systems must precede recovery in forest products markets.
- Reduced forest products exports to Asia have created oversupplies and in some cases forced prices down.
- European sawnwood exports made up 17% of Japan's sawnwood imports in 1997, but in mid 1998, market share growth stalled with the downturn in demand.

4.1 Global impact

At this time, mid 1998, it is impossible to overlook the significant impact the downturn in Asian economies is having on world forest products markets, including those in the ECE region. The Asian crisis is complex and multi-causal: its final outcome is by no means clear as of mid 1998 (see chapter 2). The aim of this chapter is to identify and, to the extent possible, quantify the consequences of these macro-economic developments for the forest and forest products sector, and in particular for forest products markets in the ECE region. Since the Asian crisis centers around Japan, the largest consumer of tropical forest products, some additional information is presented here on Japanese forest products trade and production in 1997 and 1998. Indonesia is highlighted to illustrate the situation of an Asian producer.

The features of the Asian crisis which appear most relevant to the forest and forest products sector include:

- shrinkage of many economies, including the largest, Japan, reduced disposable income and weak demand for housing;
- major currency fluctuations, including a weak yen and catastrophic falls for the currencies of many of the

so-called "tiger" economies, including the Thai baht, the Malaysian ringgit and the Indonesian rupiah;

- chaos in the financial sector, including bank closures, difficulties for trade financing, high interest rates and reluctance of foreigners to invest in the region, because of the high risks involved;
- structural reform programmes, in some cases led by the IMF, intended to change the inefficient and sometimes corrupt political/economic systems previously in place;
- in a few countries, notably Indonesia, profound and rapid political and social change;
- the sense of confidence, indeed euphoria, as regards the long term economic and social outlook for Asia has disappeared.

These developments translate in general terms into the following features of forest products markets:

- reduced demand for all products in all Asian markets, domestic and importing. In particular, the drop in Japanese and Korean import demand for sawnwood and plywood has major consequences for world trade patterns for forest products;

- changes in the price competitiveness of exporters, inside and outside Asia; those whose currencies move together with the dollar have found their products relatively more expensive on Asian (and other) markets than those whose prices and costs are denominated in the devalued south east Asian currencies.

- producer countries however have frequently not been able to benefit from their improved price competitiveness, because of the institutional and financial turbulence, as well as the much increased cost of imported inputs.

It is of course desirable to measure and monitor these developments: however it is not always clear what indicators are the appropriate ones for use by analysts. The following trends, which are presented in more detail below may be considered symptoms of the above mentioned broad developments:

- lower volumes of consumption and imports in Asian markets;
- changes in market share of suppliers;
- reductions in shipments by some south-east Asian producers, despite devalued currencies;
- new government regulations to influence trade and production, including log export bans, and forced changes to export associations/cartels.
- production cutbacks, closure of capacity and bankruptcies in the forest products industries.

Price changes do not transmit a very clear message as they are the net result of opposing factors: weak demand and supply constraints in some way balance each other out, with the result of undramatic price movements (but at much lower volumes).

A number of exporters, including Canada, United States, Russia, New Zealand and Chile, are major suppliers both to Asia and to other regions. One possible consequence of the Asian crisis and the reduced levels of imports would be for these suppliers to "divert" supplies intended for Asia to other markets. It is not clear yet to what extent this has occurred. A major influence in this global balance equation has been the continued strength of European and, above all, North American forest products markets, which so far, do not seem to have been unduly affected, in terms of price or trade pattern by "diverted" supplies from Asian markets.

Anecdotal evidence seems to indicate that one consequence of the generally weak demand has been a steep decline in illegal logging and trade.

4.2 Specific impacts on the ECE region

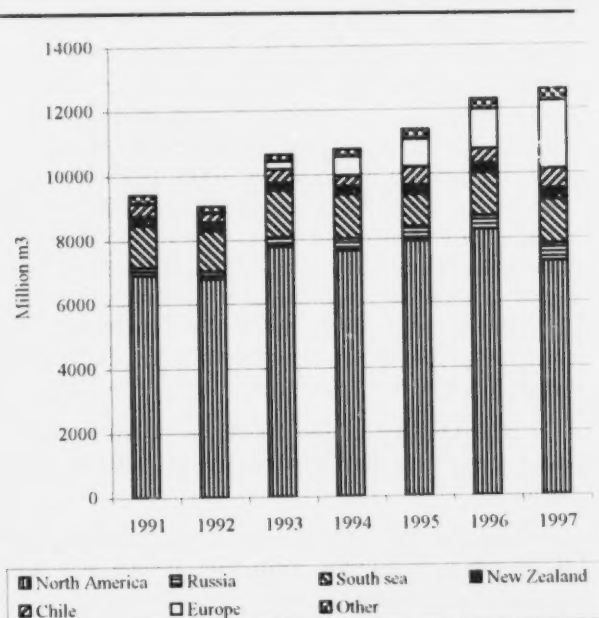
The overall increases in ECE region forest products exports to Asia recorded for 1997 mask the sharp decrease in forest products imports which occurred in the second part of the year, notably, after the Timber Committee met in October. Indeed it was not until first-quarter 1998 statistics became available that the profound extent began to unfold of the inter-related and complex problems which originate in political, economic and monetary systems and which penetrate throughout Asia, including forest products manufacturing.

All parts of the ECE region have been touched: North America, especially the west coast exporters; new exporters to Asia from Europe; and eastern Russia, with its mills, ports and ships geared for the Japanese and Korean markets. It is too early to weigh the full impacts on the ECE forest products trade, but some examples have appeared.

By all accounts the drive for increased market share in Japan by European sawnwood producers mentioned in the 1994 *Review*, has been a success as measured by the 17% market share of all sawnwood imports in 1997 (graph 4.2.1). In 1997, Europe became the number 2 supplier to Japan, with 2.1 million m³, displacing the south east Asian region.

GRAPH 4.2.1

Japanese sawnwood imports by country, 1993 to 1997



Source: Japan Wood Products Information and Research Center, 1998

which had 1.4 million m³ although still well below North America. Europe's growing market share, rising from 2% in 1993, appears to have come at the expense of North America, however there was not direct substitution as the total volumes imported have increased by 18.5% over this 5-year period.

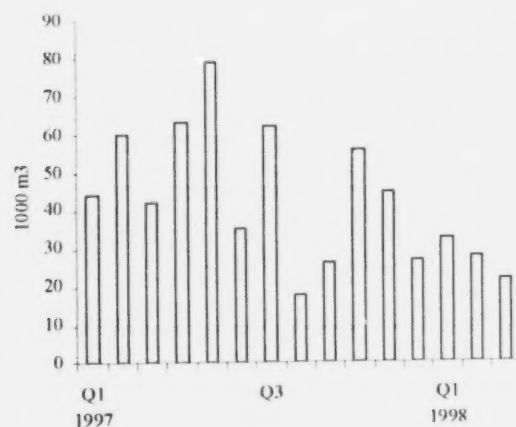
In the first five months of 1998, with all Japanese sawnwood imports reduced, including those of Europe (down 61%), the market shares were reduced for European sawnwood by 3 percentage points (16.7% to 13.5%).

In the first quarter of 1998, the exports of sawnwood from Finland to Japan have decreased by 42% from the same quarter of 1997 and could be 50% less for the year (graph 4.2.2). The Finnish Sawmill Association stated in an article published on the *Taloussanomati* website that other European countries' exports to Japan are also down. A decrease of 10% in the price of sawnwood sent to Japan has not improved Finnish exports. At least in the first quarter of 1998 the decrease in shipments to Japan have been compensated by increased shipments to Europe according to the article.

The Asian crisis has had long reaching effects and the trade press has had included isolated stories. For example in early 1998, two pulp mills in the southern State of Alabama (United States) idled 700 workers when they were forced to shut down temporarily when their Indonesian market collapsed: with weakened currency and difficulties in establishing credit, the Indonesian paper mills which needed the softwood pine pulp, could not afford it.

GRAPH 4.2.2

Finnish sawnwood exports to Japan, 1997 to 1998



Source: Finnish Forest Industries Federation, 1998.

4.3 Impacts on the radiata pine trade and other forest products

The strong trade between the main radiata pine suppliers, New Zealand and Chile, and the main Asian buyers, Japan and Korea, has been weakened. In 1998, companies in New Zealand were cutting costs through production reductions, layoffs and restructuring of operations according to *Random Lengths Exports*.

New Zealand's log exports to Japan fell 40% in the fourth quarter of 1997, compared to the same 1996 quarter, leaving the annual total down by 17%. In the first two months of 1998, log exports to Japan fell 34%. Exports to New Zealand's larger export market, Korea, held up in 1997, but prices were forced down by 30 to 40%.

The newer trade channels to Asia from suppliers in Africa and South America, not only for logs, but also for sawnwood and plywood, have been interrupted. Some trade reports indicate that logs for delivery to Malaysia and Japan have not been shipped. Some African veneer and sawlogs were left in the forest when markets collapsed. Brazilian plywood production has slowed, as have all exports from Brazil to Asian destinations.

4.4 Japan's forest products production and trade

(i) Introduction

Japan imports approximately 80% of its forest products consumption and has widened its sources to all forested continents in the 1990s. Accordingly, projections for 1998 imports of forest products show a fall of 28% from last year according to the ITTO *Market News Service*. The scale of the decreases in demand has apparently made forecasting 1998 raw material imports difficult and traditional information sources were not publishing forecasts out more than one or two quarters in early to mid 1998.

As the Japanese housing market turned down in 1997, following the April rise in sales tax from 3% to 5%, housing starts fell from a pre-1997 average of 1.5 million units, to 1.4 million; the forecast in early 1998 was for a decrease to 1.3 million units. Indeed this is a serious downturn, but not as sources have claimed, a "total collapse." In an attempt to revive the demand, the Public Housing Loan Corporation under the Ministry of Construction dropped housing loan interest rates again in April, down to 2.75%. During the last years an antiquated housing stock which was rather temporarily built following the WWII, has been being

replaced. A large renovation and remodelling market exists too for those homes not being replaced.

Of the new homes, about 45% are wood-based and each home uses about 23 m³ of sawnwood, about 25% less than a larger American house, but much more than most European houses. To meet sawn softwood demands, which are almost totally consumed by housing construction, Japan imports an increasing share, 38% in 1997, of its sawnwood requirements. As Japanese sawmills continue to close, especially the small- to medium-sized mills, a trend which could escalate in 1998, a greater percentage of sawnwood will be imported.

The recent sharp fluctuations in the value of the yen have affected importers. Compared to the dollar, the yen fell below 140 in the summer of 1998 and this resulted in the suspension of many import negotiations. The weak yen has pushed import costs up sharply.

The Japanese imports continue to shift from the primary raw materials of sawlogs and veneer logs, to sawnwood, plywood, other panel products, engineered wood products and secondary manufactured products. Increasing labour and manufacturing costs in Japan will continue to shift manufacturing offshore and to increase processed forest products.

The downturn in the Japanese market is negatively affecting the world trade of sawnwood. About 70% of North American overseas exports go to Japan. At the other extreme of the ECE region, only 11% of Russian sawnwood exports went to Japan in 1997. In between were Europe's 25% of overseas exports which went to Japan (most European exports do not go "overseas"). Additionally the United States has shipped up to 75% of its log exports to Japan and

Russia has shipped 7% of its logs to Japan. For comparison, New Zealand has shipped 30 and 35% of its sawnwood and log exports respectively to Japan.

(ii) Sawnwood production and imports

Domestic production of sawnwood in Japan faces increasing costs of manufacturing, raw materials and labour. Sawmills sharply reduced production in early 1998 as demand for sawnwood slackened. There were over 370 bankruptcies of sawnwood-related enterprises in Japan in 1997, which was about 70 more than in 1996. Closures continued in the first half of 1998 too.

Japanese sawnwood imports in 1997 increased by about 12% in volume over 1996, but only 1% in value¹ (table 4.4.1). (It should be noted that annual 1997 data cover both strong market conditions in early months and weaker conditions later on.) Sources of supply keep diversifying and Russian sawnwood imports keep increasing (but are still less than one-tenth of log import volumes from Russia) (graph 4.4.1). But in early 1998 Russian sawmills exporting to Japan were cutting production by up to half; prices for spruce and fir logs were \$350 per thousand board feet, less than half the cost of United States imports according to *Random Lengths Exports*.

In the first five months of 1998, total sawnwood imports were at 3.3 million m³, roughly half of the equivalent 1997 period according to the Japan Wood-Products Information and Research Center (JWPIRC). Sawnwood traded in dollars was hurt by the dollar's strength compared to the yen in 1997 and the first half of 1998. Sawn softwood from Canada, the largest supplier, was down almost 1 million m³ according to the JWPIRC.

TABLE 4.4.1
Japanese sawnwood imports, 1996 and 1997

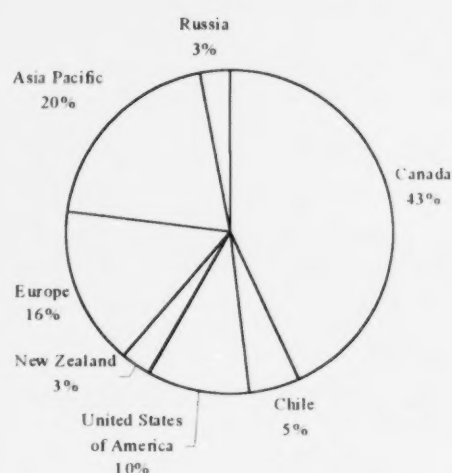
	Volume (1000 m ³)		% change 1997/1996	Value (in million \$)		% change 1997/1996
	1996	1997		1996	1997	
North America	7,267	7,263	-0.1	3,051	2,765	-9.3
Asia Pacific	2,335	2,640	13.1	1,311	1,386	5.7
Europe	1,235	2,109	70.8	415	645	55.6
Russian Federation	407	524	28.8	97	123	26.9
Latin & South America	32	43	35.7	21	26	21.5
Africa	5	8	54.8	3	4	30.2
Total	11,281	12,587	11.6	4,899	4,950	1.1

Source: *Japan Lumber Journal*, 1998

¹ In these times of inflation and currency devaluations the reporting of import "values" can be rather inaccurate.

GRAPH 4.4.1

Japanese worldwide sawn softwood import sources, 1997



Note: This graph is only softwood.

Source: Japan Lumber Journal, 1998.

Sawnwood traders in Asian currencies in the first half of 1998 had not increased their share of the Japanese sawnwood market. Again figures based on only the first five months of 1998 may change with the full year's statistics (table 4.4.2).

TABLE 4.4.2

Market shares of Japanese sawnwood imports, 1997 and 1998

	1997	1998
North America	57.7	59.4
Europe	16.7	13.5
Southeast Asia	10.9	10.7
Chile	4.9	5.9
Russia	4.2	4.3
New Zealand	2.7	3.0
Others	3.0	3.0
Total	100	100

Note: 1998 figures based on first 5 months only.

Source: Japan Wood-Products Information and Research Center, 1998.

Japan's imports of sawn temperate hardwood in 1997 were up 8.8% to 400,000 m³ (small compared to softwood and tropical hardwood). United States sawnwood registered a 4% increase over 1996, but did not regain the 1995 level. Imports of all hardwood

sawnwood, including tropical, were 40% lower in the first quarter of 1998, down to 0.3 million m³ in comparison to the first quarter of 1997 according to the JWPIRC.

From the United States, western spruce-pine-fir 2x4s² fell from \$600 per thousand board feet (MBF) in 1997 to \$440 per MBF in 1998. Prices are delivered to Japan according to *World Wood Review*. The difference would have been smaller if expressed in yen. European sawnwood is being imported dry in contrast to some of the North American sawnwood.

(iii) Log imports

The complexion of Japanese log imports changed dramatically in 1997, falling by 9% in volume and by 22% in value (table 4.4.3). Imports of lower-priced Asian logs and Russian logs were maintained or increased at the expense of North American logs which had the highest total value in 1996. Competition by log imports from other sources, for example Russia, where Japanese investors have helped build mills and export facilities, and New Zealand, which also has some Japanese investments, have had the effect of driving down North American timber prices. During 1997, Douglas fir log prices fell 45%, from \$1200 per MBF to \$650 per MBF according to *World Wood Review*.

Japanese imports of logs, both softwood and hardwood, were 31% lower in the first five months of 1998 as compared to the same months of 1997. Softwood log imports were down 18 percent in the first quarter: Russian logs down 30%, Radiata pine from New Zealand and Chile was down 15%, and North American logs were down 33%. On much lower volume levels, European-sourced logs were unchanged from 1997.

With falling prices for Asian-sourced logs, high-priced stocks had to be drawn down before new imports. For example, the highest quality meranti logs from Sarawak fell from \$240 per m³ in mid 1997 to \$102 in mid 1998, a 58% reduction in price. In addition to falling prices, another reason for delaying log purchases were the lower tariffs and taxes coming from exporters. In an effort to increase sales to Japan and other destinations, Malaysia reduced its export tax to 10%, but sales were still suffering.

With decreasing log exports from the United States in 1997, Russia now supplies the greatest volume of softwood logs to Japan; in fact, Russia now

² A 2x4 is a board that is nominally 2 inches by 4 inches in cross section, but which is actually 1.75 inches by 3.5 inches. Their most common use is in residential construction.

TABLE 4.4.3
Japanese log imports, 1996 and 1997

	Volume (1000 m ³)		% change 1997/1996	Value (in million \$)		% change 1997/1996
	1996	1997		1996	1997	
North America	7,043	4,757	-32.4	2,150	1,302	-39.4
Asia Pacific	7,999	7,655	-4.2	1,511	1,329	-12.0
Russian Federation	5,421	6,137	13.1	593	659	11.2
Africa	667	662	-0.8	152	143	-5.4
Europe	203	155	-23.7	37	30	-18.8
Latin & South America	6	2	-65.1	3	2	-34.7
Total	21,339	19,368	-9.2	4,446	3,466	-22.0

Source: *Japan Lumber Journal*, 1998

supplies more logs than any country alone, and with a decrease in log exports forecast for 1998 from the Asia Pacific region, Russia could supply more than any region too. A meeting of the "All Japan Russian Logs Dealing Association" in 1998 cited weak imports in 1998, forecast at 4.3 million m³, over 40% less than the 6.1 million m³ imported in 1997. Stating that Russian timber is indispensable for the Japanese market, continued Russian imports were anticipated by the Association because of low price and high quality.

(iv) Plywood production and imports

On account of the 16-month decline in housing starts as of June 1998, the plywood market has been seriously depressed. As mills are facing tough price competition from imported plywood, production has been going down and more Japanese plywood makers are closing (graph 4.4.2). In contrast, most other panel products maintained production in 1997.

Japan Lumber Journal forecast a 30 to 35% drop in domestic manufacturing in 1998 and in March, one major manufacturer announced a 50% production cut. In the first five months of 1998, all plywood production was down 23% from the same months in 1996 according to JWPIRC. The production of softwood plywood in the first quarter of 1998 was 293,000 m³, down about 30%. Softwood plywood represents about 34% of domestic production.

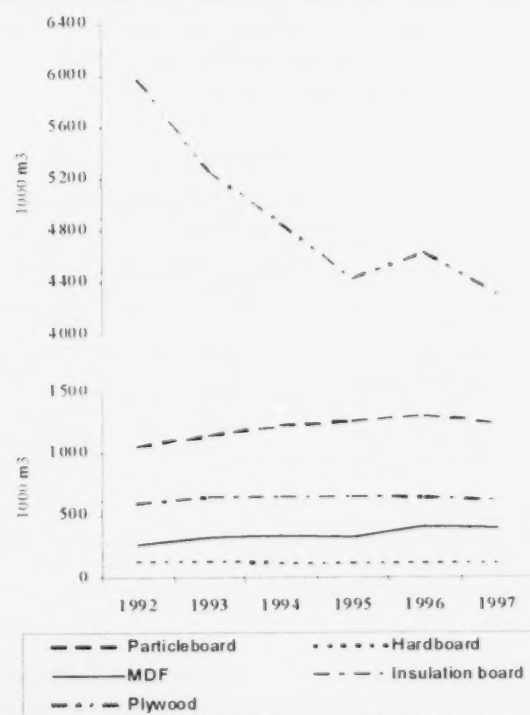
Imports of plywood were flat in 1997, following a steep rise in 1996 (graph 4.4.3). In the first five months of 1998 plywood imports were down one-third. Other panel products like MDF and particle board showed increases in 1997, but may fall back in 1998.

The majority of plywood was imported from

Indonesia in 1997, but Malaysian plywood continues to erode market share (graph 4.4.4). A number of other countries were increasing market share in 1997, but this picture could well change in 1998 (graph 4.4.5), notably, with the dismantling of the APKINDO sales organization (see below).

GRAPH 4.4.2

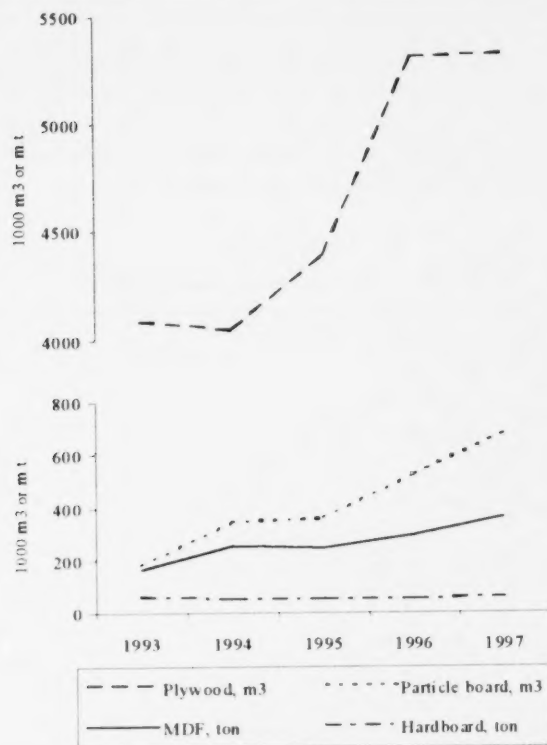
Japanese production of panel products, 1992 to 1997



Source: *Japan Lumber Reports*, 1998.

GRAPH 4.4.3

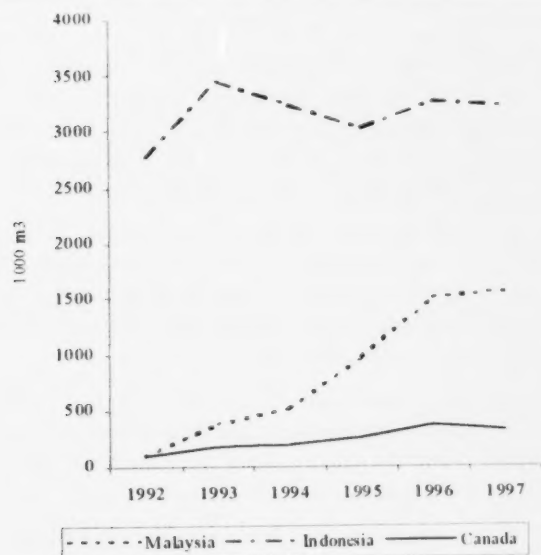
Japanese imports of panel products, 1993 to 1997



Source: Japan Lumber Reports, 1998

GRAPH 4.4.4

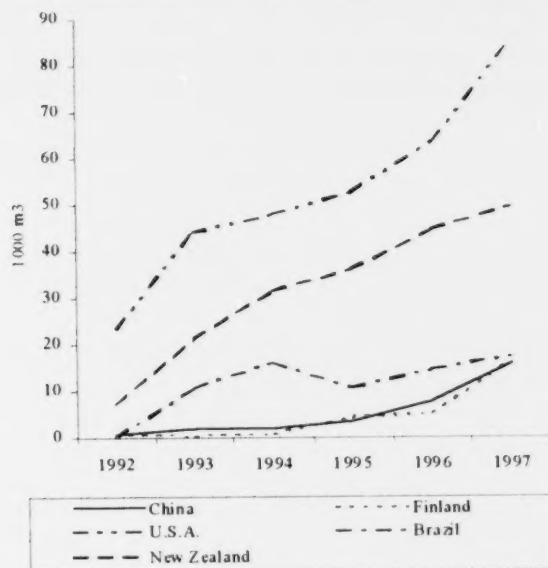
Japanese plywood imports, 1992 to 1997



Source: Japan Lumber Journal, 1998.

GRAPH 4.4.5

Japanese plywood imports, 1992 to 1997



Source: Japan Lumber Journal, 1998.

4.5 Indonesia's forest products production and trade in 1997 and 1998

World attention was again drawn to the tropical forests in 1997 and early 1998 when as a result of droughts caused by the El Nino weather cycle, large areas of forest burned in Indonesia as well as in Malaysia, Brazil and Mexico. Certainly lack of rain was a critical factor, but these fires were not the result of spontaneous combustion. Indonesian fires were blamed on land clearing for oil palm plantations, forest concession clearing before replanting and subsistence farming. Regardless of the cause in Indonesia, heavy smoke caused health and safety hazards in Indonesia and surrounding countries. International efforts to stop the fires were dampened by the announcement by the former Indonesian government to clear even greater land areas for rice farming to feed the burgeoning population.

Indonesian fires were extinguished in May 1998 with the heavy rains, but that did not put out the burning economic crisis. An International Monetary Fund (IMF) Assistance Package in April 1997 included \$7 billion and far reaching conditions that, among others, eliminated various bans on exporting forest products, reduced or eliminated export tariffs and the disbanded of the production and export marketing cartels for sawnwood and paper as well as the plywood cartel called APKINDO.

The full implementation of these requirements has not yet occurred and the full effects of these sweeping reforms in forest and forest industry sector policy have not yet been felt in mid 1998. For example, lacking alternatives, the former marketing and transportation structure of APKINDO remained in place, despite the departure of its head, who went on to become Minister of Trade before the change of regime.

While tariffs were lowered to a maximum of 10%, and export taxes were eliminated or reduced to meet IMF requirements, in order to discourage over exploitation of Indonesian forests, beginning in March 1998, a system of resource rent taxes was imposed.

The Indonesian Ministry of Forestry predicts that even with the reduction of tariffs, quotas and other restrictions on wood exports, the current drop in Asian demand for forest products will result in 25% less wood-based exports in 1998 than in 1997, down from \$8.3 billion to \$6.2 billion. Since July, 1997, the Indonesian rupiah has fallen from below 2,450 rupiah to the dollar to over 10,000 in mid 1998. While a devaluation would be good for exporters if payment was in stronger currencies, the currencies of many Asian importers have likewise devalued. For Indonesia, which is dependent on exports to Japan and Korea where Indonesian plywood is used mostly for construction, a sector particularly hard hit by the recent crisis, the result has been catastrophic.

Pulp exporters have benefited from the devaluation. Indonesian pulp production has risen steeply in the 1990s, due to the combination of abundant fibre and low manufacturing, labour and energy costs. Even before the crisis, Indonesia was one of the lowest cost pulp producers in the world according to CIFOR.

The broad economic reforms imposed by the IMF loan could eventually relieve the problems, but currently the high interest rates have made access to necessary working capital difficult for the forest industry. This is aggravated if companies had debts with foreign investors in dollars, as repayment in rupiahs is difficult, especially with decreased domestic sales revenues.

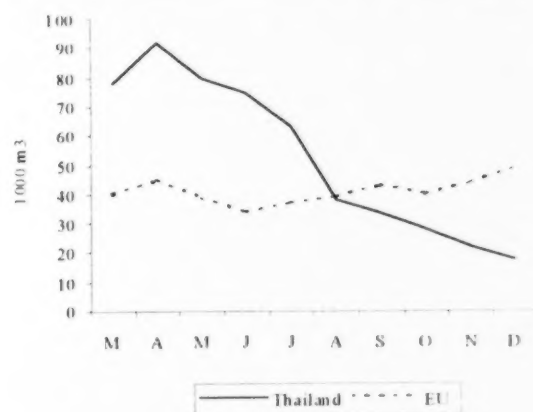
In the short term Indonesian forest products companies have not benefited fully from the devaluations in their exports outside Asia because of increased shipping costs plus a more mechanical problem, that of a lack of shipping containers resulting from a lack of imports. Indeed, most forest products companies have reduced production and some have closed, at least temporarily to await stabilization of markets. Companies are faced with high-priced stocks

and with falling product prices, sales can be unprofitable. Large, integrated companies, e.g. some of the pulp companies mentioned above, are having profitability dragged down by other weaker sectors.

While it is difficult to generalize between countries, an example of Malaysia's exports of sawnwood to Thailand and to the European Union clearly illustrates the difference between intra-Asian trade and trade outside of Asia (graph 4.5.1)

GRAPH 4.5.1

Malaysian export of tropical sawnwood, 1997



Note: October-December estimates based on partial figures

Source: ITTO, 1998

4.6 Future

Forestry has an inherent long-term perspective, but in forest products markets a year can be an eternity. For exporters from the ECE region, 1998 will be exceptionally long. And it will be an even longer year for the Asian traders and timber-based industries.

With an average demand for housing at 1.5 million units, and a downturn in 1998 to perhaps 1.3 million units, the Japanese housing market is going to consume substantial timber-based materials now, and even more whenever the economy rebounds.

All exporters were forced to cut prices to maintain sales. But now with the deep recessions and devalued Asian currencies, many importers are faced with high priced stocks and lack of demand.

Those companies which survive the crisis will be more efficient. The combination of low raw material and labour costs combined with efficient technology and management, could make these revived companies more competitive on world markets.

Some investments in Asian businesses are starting, indicating that western companies believe in a profitable future. Some companies are hedging their bets by minimizing initial investments, but still seriously making a long-term commitment. In the pulp and paper sector, a few Nordic and North American pulp and paper producers were acquiring capital assets in mid 1998 (at prices made attractive by Asian currency devaluations). Currency devaluations resulted in reduced production costs and with continued instability and future production efficiencies, production costs were forecast to fall further by *Papermaker*. The downside of the political and economic instability is that high dollar debts are becoming increasingly burdensome to Asian companies. Morgan Stanley Dean Witter has predicted that only 37% of proposed capacity increases in Asia will actually be built over the next 2 years, which would be the slowest growth rate in the last 15 years. However with two-thirds of the world population and increasing standards of living, eventually greater forest products processing capacities will be required.

In summary it is impossible at this point to either measure or predict the full effects of the Asian crisis. Unfortunately as mentioned in the economic background chapter Japan and other economies have entered into deep recessions. Although the consequences of the recessions are hardest on Asian nations, they are being felt worldwide.

CHAPTER 5

ROUNDWOOD SUPPLY, TRADE AND CONSUMPTION

Highlights

- European removals of roundwood rose in 1997 in accordance with higher demand from processing industries.
- United States removals fell slightly as logs normally exported to Asia were consumed in domestic markets.
- Roundwood removals in Russia sank to new lows, but exports recovered to near 1995 levels.
- Baltic exports of roundwood to Finland and Sweden continued to grow strongly.
- Roundwood markets in Asia, notably Japanese imports, fell sharply in 1997 and the first half of 1998, causing major shifts in the pattern of roundwood trade in the Pacific region.

This chapter briefly describes trends in the supply and trade of roundwood, as a background to the description of markets for the various products described below. A complicating factor for the market analysis is that frequently one assortment of roundwood can be a raw material for several different types of product (e.g. round pulpwood can be used for the manufacture of pulp or of particle board or of fibreboard), and that in trade statistics, no distinction is now made between logs and pulpwood; data are available for coniferous or non-coniferous "industrial wood in the rough". For these reasons it is often impossible to make direct links between product markets and supply of the raw material for that product.

Another factor is the differences in scales between different parts of the market: many roundwood markets are intensely local, with regional particularities, small volumes and many sellers and buyers, (sometimes, but not always grouped into associations of one type or another). However there are also very high volume flows, over long distances, such as the transpacific trade in logs or chips, or the large-scale pulpwood imports by Sweden and Finland from Russia and the Baltic States. Taken together these factors make it difficult to paint a clear picture of general market conditions: this chapter aims to present the basic parameters and trends, and some country data

in tables. Because of the fragmentation of roundwood markets, the price series presented may well not be typical of developments elsewhere.

5.1 Developments in Europe

In 1997, in line with the generally strong demand conditions, European roundwood supply increased significantly. European removals, still by far the largest component of supply¹, rose by 11.6 million m³ (3.4%) to reach 354 million m³² (table 5.1.1). This was still 10 million m³ less than the record year of 1990, although the 1990 figure was distorted by the windblow in Germany. The increase was concentrated on coniferous industrial wood in the rough (logs and pulpwood); fuelwood and other industrial wood fell (although the reliability of annual statistics on these assortments cannot be considered very high). Non-coniferous removals also increased only marginally, although the rise would no doubt be higher if French and German data had been available, as these are the

¹ The components of European wood and fibre supply (1990 share of total in brackets) are European removals (69%), residues of wood processing (i.e. chips and residues) (8%), waste or recovered paper (13%) and imports from other regions (10%). Source: *European Timber Trends and Prospects: into the 21st century* (ECE/TIM/SP11) (ETTS V), 1996.

² However, no data have yet been received on removals from two of the five largest European producers of roundwood: France and Germany.

two of the three largest producers of hardwoods. Turkey, the second largest producer recorded a significant drop. Sweden and Finland both recorded strong increases in removals, by 3.9 million m³ (6.9%) and 4.7 million m³ (10.1%) respectively. The 1997 figure for Finnish removals, just short of 60 million m³, was an all-time record.

European removals of coniferous logs rose even more strongly than total removals, by 6.4% in total, and by 11.6% and 15.1% in Sweden and Finland: this was due to the generally high levels of production of sawn softwood, which are described in chapter 6 (table 5.1.2). All major European producers of coniferous logs recorded increases. The strong demand

TABLE 5.1.1
Roundwood removals in Europe, 1995 to 1997

Product	1995	1996	1997	Change 1996 to 1997	
				Volume	Per cent
			(million m ³)		
Softwood	253.4	238.3	248.5	10.2	4.3
Hardwood	105.9	104.3	105.7	1.4	1.3
Total	359.3	342.6	354.2	11.6	3.4
of which :					
Fuelwood	54.2	56.6	56.1	-0.5	-0.9
Industrial wood	305.1	286.0	298.1	12.1	4.2
of which					
Sawlogs	173.3	163.6	174.1	10.5	6.4
Pulpwood	116.1	106.6	108.9	2.3	2.2
Other	15.7	15.8	15.1	-0.7	-4.4

TABLE 5.1.2
Removals of softwood logs in selected countries, 1994 to 1997

	1994	1995	1996	1997 ^a	Change 1996 to 1997	
					Volume	Per cent
			(1000 m ³)			
EUROPE	135476	142627	134540	143199	8659	6.4
of which :						
Sweden ^b	28500	34300	30200	33700	3500	11.6
Finland	22012	21697	20267	23332	3065	15.1
Germany	19741	20314	19362	19362	...	...
France	12815	13407	12727	12727	...	...
Austria	7953	7513	7664	8027	363	4.7
Poland	7726	7656	7542	8022	480	6.4
Czech Republic	5156	5465	5810	6221	411	7.1
Norway	4282	4590	4031	4537	506	12.6
Spain	4675	4375	4183	4183	...	...
United Kingdom	3464	3443	3567	3642	75	2.1
Portugal	3796	3810	3500	3500	...	...
Romania	1800	1974	2479	2720	241	9.7
Switzerland	2802	2820	2215	2392	177	8.0
Other countries	10754	11263	10993	10834	-159	-1.4
Russian Federation	41870	42370	32447	28100	-4347	-13.4
United States	175743	173404	171386	176391	5005	2.9

^a Preliminary.

^b Felling year.

conditions are reflected in price developments for coniferous logs in Finland and Germany, which recovered from the decline in 1996 (graphs 5.1.1 and 5.1.2).

GRAPH 5.1.1

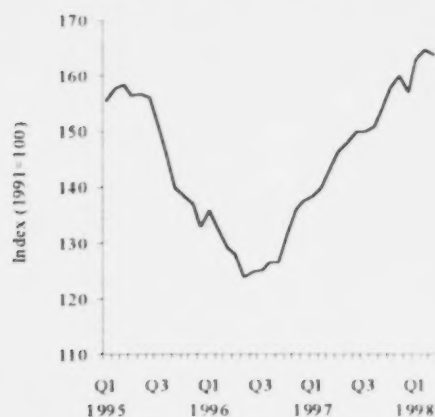
Finnish log prices from private forests, 1995 to 1998



Source: Finnish Forest Research Institute, 1998.

GRAPH 5.1.2

Price indices for spruce logs from public forests in Germany, 1995 to 1998



Source: ZMP, 1998

In Switzerland, which could be an example to other mature high cost roundwood markets, the advent of efficient (and relatively "high-tech") processing of smaller diameter logs has rejuvenated the market for spruce and fir logs. Previously, larger logs were preferred, despite their frequent defects of shake and rot which develop with age. Now, engineered wood products like glulam beams and fingerjointed boards have also permitted the utilisation of shorter, smaller diameter logs. *La Forêt* states that these new composite wood products permit high quality construction timber to be obtained from smaller resources and raw materials.

In 1997, Europe's trade in wood in the rough expanded sharply (table 5.1.3). Exports rose by 2.1 million m³ and imports by 4.5 million m³. The rise in imports concerned mainly the three largest forest products producers, Sweden, Finland and Austria, and were probably concentrated, at least for Finland and Sweden, on pulpwood from around the Baltic Sea (Baltic states, Russia, Germany, Poland). Italian imports, mainly of tropical logs fell quite markedly. For exports, the largest increases concerned Germany and Slovakia, who both increased exports by 0.5 million m³.

The complex relationship between processing capacity, foreign markets, domestic removals and roundwood trade is illustrated by developments for Estonia. In that country, the recent increases in sawmilling capacity have led the National Forestry Board to forecast declining future sawlog exports. In 1997 roundwood exports from Estonia were about 3 million m³, which were over half (53%) of the annual harvest volume. Estonian roundwood removals advanced significantly in 1997, by 51%, to reach 5.6 million m³. Most of the roundwood exports were pulpwood.

In general the Baltic states have become some of the major roundwood exporters in Europe, mostly to Finland and Sweden. Their exports rose again in 1997 by 34% for the group as a whole, with Estonia the largest exporter (table 5.1.4).

TABLE 5.1.4

Baltic Countries exports of wood in the rough,
1992, 1996 and 1997
1000 m³

	1992	1996	1997	% change 97/96
Estonia	530	1898	2900	33.3
Latvia	475	1467	2120	44.5
Lithuania	285	952	765	-19.6
Total	1290	4317	5785	34.0

Source: UNECE TIMBER database

TABLE 5.1.3
Exports and imports of industrial wood in the rough, 1994 to 1997

	1994	1995	1996	1997 a	Change 1996 to 1997	
					Volume	Per cent
	(1000 m ³)					
EXPORTS						
EUROPE :						
- Coniferous	12036	12668	10848	12261	1413	13.0
- Broadleaved	5415	6853	5373	6085	712	13.2
TOTAL :	17451	19521	16221	18345	2124	13.1
of which :						
Germany	4698	4919	2992	3517	525	17.5
Czech Republic	605	2161	2687	2657	-30	-1.1
France	2433	2475	2227	2325	98	4.4
Sweden	1054	1725	1621	1418	-203	-12.5
Switzerland	1053	1016	979	1147	168	17.2
Slovakia	910	759	529	1031	502	94.9
Belgium-Luxembourg	874	805	748	885	136	18.2
Austria	631	482	625	806	181	29.0
Hungary	451	562	555	701	146	26.3
Finland	1444	865	579	640	61	10.5
Norway	435	437	385	473	88	22.9
Portugal	629	778	452	452	-	-
Other countries	2234	2537	1842	2294	452	24.6
Russian Federation	11117	18374	15915	17700	1785	11.2
Canada	1253	1187	955	721	-234	-24.5
United States	12215	12817	11937	10864	-1073	-9.0
North America	13468	14004	12892	11585	-1307	-10.1
IMPORTS						
EUROPE :						
- Coniferous	19099	20221	17634	20222	2589	14.7
- Broadleaved	21816	25554	18477	20361	1884	10.2
TOTAL :	40915	45775	36110	40583	4473	12.4
of which :						
Sweden	6666	7653	5018	7648	2630	52.4
Finland	6761	9353	6575	6734	159	2.4
Austria	4828	4454	4451	5165	714	16.0
Italy	6068	4936	4936	4504	-432	-8.8
Norway	2617	3717	2476	2844	368	14.9
Belgium-Luxembourg	2817	3141	2391	2823	432	18.1
Spain	1426	2192	1902	2116	214	11.3
France	1989	2345	1601	1784	183	11.4
Germany	2742	1743	1263	1653	390	30.9
Portugal	1105	1632	1065	1065	-	-
United Kingdom	311	662	836	576	-260	-31.1
Turkey	1196	777	992	545	-447	-45.1
Other countries	2389	3170	2604	3126	522	20.0
Canada	5255	6495	6088	6635	547	9.0
United States	797	706	524	582	58	11.1
North America	6052	7201	6612	7217	605	9.2

a Preliminary

Part of the large increase in Latvia's exports (44% in 1997) is due to construction of new port facilities by the largest pulpwood producer. The Timber Committee Baltic Countries Forest and Forest Industries Study Tour in 1997 visited the port of Liepaja. According to the Latvian Forest Service, the dilapidated military port has been turned into a free trade zone in 1998 and now pulpwood is shipped from the new facilities.

In summer 1998, the French Office National des Forêts registered price rises at its annual sales of standing timber of about 10% for Scots pine and 3% for beech. Log auctions in the spring of 1998 in France and Germany found many buyers: with strong demand, higher prices were bid.

5.2 Developments in North America and around the Pacific

North American roundwood markets in 1997 were subject to two contrasting influences: on the one hand demand from North American industries was strong, and on the other, demand from Japan, which normally imports about 20 million m³ of roundwood and chips from all around the Pacific (North America, New Zealand, South East Asia, Russia, Australia etc.) fell sharply in the course of 1997. Korea, another major importer of wood in the rough, also experienced a dramatic drop in demand.

United States removals³ fell slightly, by 4.3 million m³ (0.7%) to 486 million m³, but this includes a drop of over 14 million m³ in fuelwood removals, and removals of industrial wood, softwood and hardwood, increased. Heavy ice storms in January 1998, covering 50,000 square kilometres in Québec, as well as some neighbouring parts of the United States will result in increased removals for Canada. In the storm zone, the greatest damage was suffered by hardwoods.

North American softwood log markets and trade have been evolving following the steep reductions in harvests from federal lands, chiefly in the United States Pacific Northwest, and the reduced demand from Japan. As a result of the reductions in harvest from federal lands, cutting has increased on industry land (and the area of industry land is increasing as companies ensure supply through purchase of forests). Export-destined logs for Asia are currently being brought back into the domestic markets in the United States.

The downturn in exports to Asia has led to an oversupply of logs on the Pacific coast of the United States and Canada. Sawmills on the Oregon and Washington coastal area have been able to buy low cost raw materials, for example Douglas fir logs, whose export price fell 43%, from \$1,154 per thousand board feet in 1996 to \$654 in the fourth quarter of 1997. There was a slight recovery in early 1998 to \$850, and further increases were expected by some analysts as stocks were brought down. The loss of traditional Asian log markets has meant that coastal sawmills in the United States states of Oregon and Washington have offers of low cost logs from Alaska and Canada too.

Canadian log exports have been negatively affected by the downturn in Asian demand, and now by the oversupply in the United States. British Columbia's log exports to Japan peaked in 1992 at approximately 413,000 million m³, but in 1997 they were estimated at less than 47,000 m³. With the decline of the Japanese log market, British Columbia exporters turned to the United States market for logs: since 1991, British Columbia log exports to the United States have risen from almost nothing, to 236,000 m³ in 1996. However, with declining United States log exports in 1997, United States sawmills found a supply source closer to home, and log imports by the United States from Canada fell sharply, to about 106,000 m³. To date the remaining United States log imports are still primarily from Canada, but some exploratory purchases have been made from Russia.

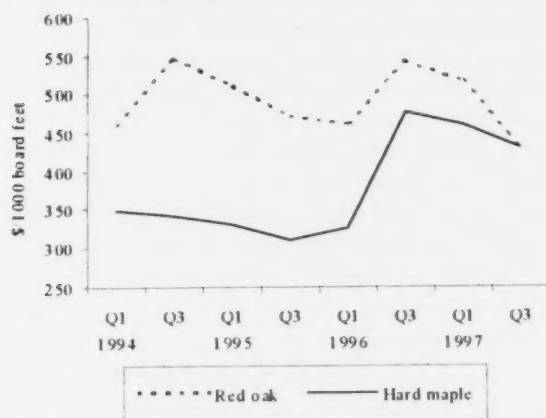
North American exports of industrial wood in the rough fell in 1997 by 1.3 million m³; indeed the drop was probably steeper than this indicates, as it was concentrated in the second part of the year, and continues into 1998.

The table in chapter 4 "Japanese log imports" covers all types of logs and shows that Japanese log imports fell by a quarter in value with the most affected suppliers being North America and New Zealand. Russian exports to Japan in 1997 increased 13% in volume and Chilean exports rose strongly, from a low base.

United States hardwood log prices reached new peaks in mid 1996, but fell throughout 1997 for many species (graph 5.2.1). Red oak log prices fluctuated, dropping slightly in 1997, but those for maple rose until they were about the same level as oak. These trends may be attributed to weaker demand for sawnwood of darker species.

³ No removals data have been received from Canada.

GRAPH 5.2.1
United States hardwood log prices, 1994 to 1997



Note: Prices paid for red oak and hard maple, grade 1 logs, delivered to sawmills, Doyle log scale.

Source: *Ohio Timber Prices*, Ohio Division of Forestry, 1998.

5.3 Developments in Russia

Russian roundwood removals sank to 84 million m^3 in 1997, down by 63% from 1992 when separate statistics became available. The decreases were about equal, at 13% for both softwood roundwood, which fell to 53 million m^3 and for hardwood roundwood, which fell to 31 million m^3 . However, Russian exports of wood in the rough advanced in 1997, by 11%, to reach 17.7 million m^3 , nearly as high as the record level in 1995 of 18.4 million m^3 .

Russian log exports to Japan advanced strongly in 1997, while Japan's imports from all other regions decreased. Japan imported 6.1 million m^3 of Russian logs in 1997, 13% higher than in 1996. With this volume Russia became the second largest source of Japanese logs, overtaking North America, but still behind the Asia Pacific region. The meeting of the "All Japan Russian Logs Dealing Association" in 1998 forecast that Russia would be the largest source of logs in 1998, but on a diminished total log import volume. Because of the rapidly changing situation in Asia, no forecasts are available for the 1998 Japanese log import volumes: however in the first 5 months of 1998, total log imports were down by 31%.

While the volume of Russian log exports to Japan went up by 13% in 1997, their value increased by only 11%. The unit value⁴ was \$107 per m^3 , which partly

explains the gains in market share over higher priced logs from North America (\$274 per m^3) and Asia Pacific (\$174 per m^3) according to *Japan Lumber Journal*.

⁴ It should be noted that unit values are a crude method of comparing prices because there is no distinction between qualities of the logs.

CHAPTER 6

SAWN SOFTWOOD SUPPLY, TRADE AND CONSUMPTION

Highlights

- European and North American consumption and trade move to record levels in 1997.
- Russian Federation production and exports decrease again.
- Baltic Countries continue to gain market share in Europe.
- Sawnwood prices continue cyclical trends and move up again in 1998 in Europe.
- Falling Asian demand threatens both new and established sawnwood trade channels.
- First exports of certified sawnwood occur in ECE region.

6.1 Consumption

Apparent consumption of sawn softwood moved strongly upwards in *Europe* in 1997, by 8.6% over 1996 (table 6.1.1 and graph 6.1.1). The volume of 79 million m³ moved consumption ahead of the last 6 years, but did not reach the 1990 level of 84 million m³. This advance came as exports (some intra-European) hit a record 31 million m³, which were up approximately 50% over 1990. Imports grew 7.7% over 1996 to reach the level of 1990 again of 30 million m³ (note 1994 imports were higher at 32 million m³). Spurred by heightened demand for sawnwood in mid 1997, production soared to 80 million m³, an all time record in *Europe*.

The United Kingdom increased consumption of sawn softwoods by 1.2 million m³ and by 16.1% to reach 8.6 million m³ in 1997, below the high in 1994 of 10 million m³. In early 1998 consumption was still strong, but tightening of interest rates in mid year may slow housing starts, and hence demand for sawnwood in the latter half of the year. It was the unexpected strength of the United Kingdom demand, along with that of a few other countries, which drove the European apparent consumption beyond the forecast of the Timber Committee which was made in October 1997.

Germany also increased consumption to a record high of 16.7 million m³, a rise of 4.3% from 1996. While the boom in demand from the reunification

construction needs is over, and domestic construction fell as noted in Chapter 2, there was continued strength in the repair and remodelling sector which resulted in higher production and imports.

1996 was a difficult year for some other European Union member countries, including Italy, as most countries had to take tough economic measures to prepare for the European Monetary Union requirements. Italy's tightened interest rates were reflected in a drop in forest products consumption in 1996, but once the EMU criteria had been met, the economy surged and in the case of sawn softwood, consumption hit a new record in 1997 of nearly 6 million m³ as imports climbed to their highest level ever.

Two other western European countries marked record consumption over 1996: Austria up by 22.5% and Norway up by 12.5%.

Improvement in the 1997 Nordic domestic markets is evidenced by increased consumption in Sweden, up 41% to 4.7 million m³, in Finland, up 38% to 3.3 million m³, and in Norway, up 13% to 2.7 million m³.

North American housing starts accelerated consumption of sawn softwood to a new high of 137 million m³. The United States demand for private housing continued to rise in 1997 and with it the need for sawnwood and wood-based panels, especially

TABLE 6.1.1

Sawn softwood balance in Europe, the Russian Federation and North America, 1993 to 1997

	1993	1994	1995	1996	1997 ^a	Timber Committee estimates ^b	
						for 1997	for 1998
	(million m ³)						
EUROPE							
Production	67.90	73.60	76.31	75.24	80.13	78.34	78.02
Imports	27.11	32.35	27.41	27.76	29.82	28.54	28.87
Exports	26.12	30.00	30.14	29.19	30.98	30.36	30.41
Net trade ^c	-0.99	-2.35	2.73	1.43	1.16	1.81	1.54
Apparent consumption	68.89	75.95	73.58	73.81	78.97	76.52	76.48
RUSSIAN FEDERATION							
Production	32.80	24.64	22.53	17.53	15.60	15.53	17.53
Imports	0.01	0.04	0.04	0.01	0.02	0.01	0.01
Exports	6.46	5.33	5.64	4.35	4.54	4.38	4.93
Net trade ^c	6.45	5.29	5.60	4.34	4.52	4.37	4.92
Apparent consumption	26.35	19.35	16.93	13.19	11.08	11.16	12.61
NORTH AMERICA							
Production	136.39	141.14	135.34	141.83	145.22	148.94	149.02
Imports	36.17	38.98	41.36	43.75	43.32	43.07	43.29
Exports	48.35	49.98	52.14	53.55	51.55	50.72	50.94
Net trade ^c	12.18	11.00	10.78	9.80	8.23	7.66	7.65
Apparent consumption	124.21	130.14	124.56	132.03	136.99	141.29	141.37

^a Preliminary.^b From Timber Committee's October 1997 session, adjusted for compatibility with historical (actual) data.^c Negative values are net imports.

oriented strand board, because in contrast to most European construction methods, American framing and siding are mostly wooden, and occasionally even foundations are made from preservative-treated wood. United States consumption increased by approximately 1% or 1 million m³ to reach 120 million m³ in 1997. The increased United States consumption was met by higher domestic production, up 1.5 million m³, and not as in the past by imports which decreased by 0.5 million m³. Responding to lowered home mortgage rates, Canadian housing shot up and domestic consumption of sawn softwood advanced by 30% over 1996 to regain the 16.9 million m³ level of 1992. At mid year, reports are confirming the Timber Committee forecasts for another increase in North American consumption in 1998.

The *Russian Federation* continued to suffer economic difficulties in 1997 and sawnwood consumption fell by 16% or 2 million m³. At 11 million m³, consumption was but 30% of the 38 million m³ recorded in 1992 when separate statistics became available from the countries in the former USSR. However, some local consumption may not be recorded in the official statistics. As imports of sawnwood are minor, the fall in consumption is resulting from decreased production. Some 40% of

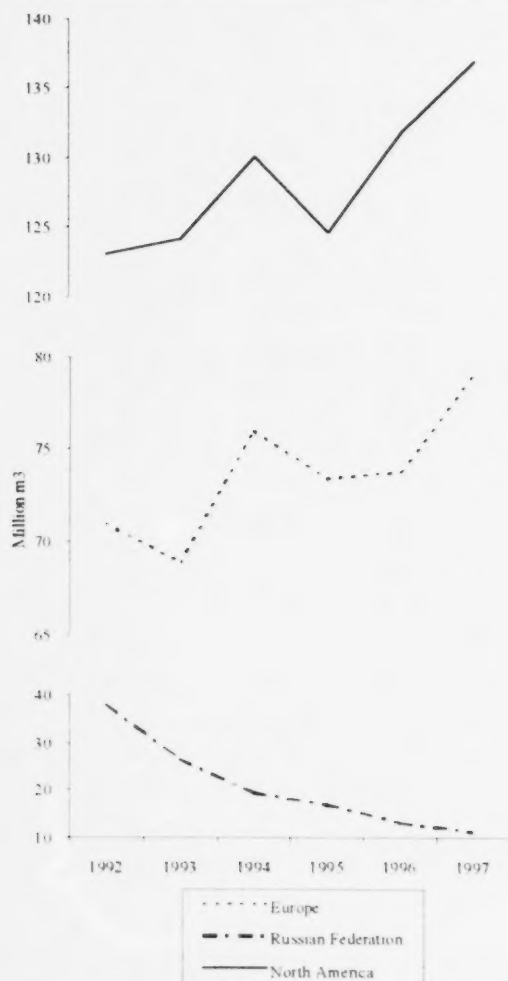
domestic consumption of sawnwood is for construction, including industrial construction, 20% is for repair and remodelling, 10% is for packaging, 5% is for furniture and 10% is for other uses according to a speaker at the Timber Committee workshop in 1997 in Arkhangelsk, Russia on "Development of marketing of sawnwood and value-added forest products in countries in transition."

Other countries in transition to market economies fared better in general. Establishing new record sawn softwood consumption levels in 1997 were Poland to 4.4 million m³ and Slovakia to 0.5 million m³. For some other countries the transition process continues to retard economic growth and consumption of sawnwood fell in Hungary by 14% to 0.7 million m³ and by 46% in Romania to 0.2 million m³. However it must be noted that Romania's production was up 21% and both Hungary's and Romania's exports rose, by 33 and 65% respectively.

The *Baltic Countries* domestic consumption rose, but not to the higher levels recorded in 1992. While production rose in Estonia, Latvia and Lithuania, three-quarters of that was exported. Because the Baltic Countries are in the process of re-establishing their role as trading nations, it is difficult to be precise on

GRAPH 6.1.1

Consumption of sawn softwood, 1992 to 1997



Source: UN/ECE TIMBER database.

the exact proportion of production which is exported. The Timber Committee Study Tour which visited the Baltic Countries in 1997 noted some sawnwood, both soft and hardwood, is imported from neighbouring countries, especially Russia (including the Kaliningrad region), then remanufactured and re-exported.

6.2 Production

Production of sawn softwood in *Europe* eclipsed the previous high in 1988 and moved up 7% to reach 79.7 million m³ in 1997 following the dip in 1996 (table 6.2.1). Most of the main exporters registered significant increases, for example Sweden up 8.8% to 15.4 million m³, Finland up 14.0% to 10.6 million m³ and Austria up an estimated 11.3% to 8.1 million m³. Germany which is both a heavy consumer and an

exporter of sawnwood, increased production by 5.2% to reach a record level of 10.6 million m³.

Switzerland was one European country which did not follow the general trend of increased sawnwood production. Construction rates have been down over the past couple years which has directly reduced timber consumption. Some sawmills closed in 1997 and although some remaining mills have invested in sophisticated machinery, they have not been able to fully take advantage of the investment. A recent study had proven that residential wood construction has responded well to promotional efforts and with a greater share of wood in housing, the sawmilling sector is poised to improve pending a general amelioration in construction.

In *North America* production swelled by 2.4% to meet both domestic and export market demands and reached a new high level of 145 million m³ in 1997. Canada increased production to 63.7 million m³ as exports to the United States continued despite the continuing restrictions of the Softwood Lumber Agreement between the Governments of Canada and the United States of America. The United States produced 81.4 million m³ of sawnwood, which was below the levels before the western National Forest lands reduced harvesting. Both the United States and Canada also benefited in the first half of 1997 from strong Asian demand, partly stimulated by the rush in housing construction brought on by the April 1997 increase in consumption tax in Japan.

Production in the *Russian Federation* continued to fall in 1997, dropping by 11% to 15.6 million m³. Since separate figures became available for Russia in 1992, production has fallen by almost two-thirds. The Timber Committee workshop mentioned above identified some reasons for the decrease. In Arkhangelsk, a northern port, and largest sawnwood producing region in Russia, the distance to the log resource has increased as the most readily available timber was logged off some time ago (regeneration is slow in the harsh climate). Transportation costs have multiplied making former resources truly uneconomical (in 1990, 8% of the sawnwood cost was for transportation, but in 1996 that had increased to 42%). Deregulation has changed business methods, not always for the better according to a sawnwood exporter in Arkhangelsk; he also mentioned that in addition, the new norms, regulations and taxes have constricted the production. The workshop visited a non-working sawmill which was apparently running only a night shift due to difficulties in purchasing electricity; meanwhile in late November the port was blocked by ice as the icebreakers were broken down.

TABLE 6.2.1
Production of sawn softwood, 1994 to 1997

	1994	1995	1996	1997 ^a	Change 1996 to 1997	
					Volume	Per cent
	(1000 m ³)					
EUROPE	73600	76308	75241	80131	4890	6.5
of which :						
Main exporting countries	57071	59261	58429	62952	4523	7.7
Sweden	13616	14737	14170	15419	1249	8.8
Germany	12365	12925	13123	13801	678	5.2
Finland	9700	9400	9300	10600	1300	14.0
Austria	7316	7552	7950	8122	172	2.2
France	6649	6827	6506	6900	394	6.1
Poland	4500	4600	4280	5010	730	17.1
Czech Republic	2925	3220	3100	3100	0	0.0
Other countries	16529	17047	16812	17179	367	2.2
of which :						
Norway	2400	2205	2400	2500	100	4.2
Spain	1995	2507	2378	2378	0	0.0
Turkey	2334	2502	2308	2308	0	0.0
United Kingdom	2122	2106	2140	2214	74	3.5
Portugal	1244	1250	1250	1250	0	0.0
Romania	867	877	924	1115	191	20.7
Switzerland	1200	1342	1240	1100	-140	-11.3
Russian Federation	24640	22525	17530	15600	-1930	-11.0
Canada	60648	59343	61828	63764	1936	3.1
United States	80493	75992	80004	81453	1449	1.8
North America	141141	135335	141832	145217	3385	2.4

^a Preliminary.

Production in the *Baltic Countries* is making up for some of the decreases from their neighbour. Increasing production by 69%, Latvia reached 2.5 million m³ and Estonian reached 0.6 million m³. However in Lithuania, where a log supply problem negatively affected sawmill output, production fell by 15% from 1996 (table 6.2.2).

Other countries in transition which secured good export markets and combined them with improved domestic consumption, like Poland, increased production. In the case of Poland the 17% increase in production more than offset the decrease in 1996 and a new record level of production was achieved at 5.0 million m³.

TABLE 6.2.2
Baltic Countries sawnwood production, 1992 to 1997
(million m³)

	1992	1993	1994	1995	1996	1997	% Change 1997/1996
Estonia	0.3	0.3	0.3	0.3	0.4	0.6	69.4
Latvia	0.5	0.4	0.8	1.0	1.5	2.6	68.9
Lithuania	...	0.6	0.7	0.9	1.4	1.2	-14.8
Total	...	1.3	1.8	2.2	3.3	4.4	33.3

Source: UN/ECE TIMBER database.

6.3 Trade

European net trade in sawn softwood decreased slightly in 1997, despite an increase in exports, as imports swelled by roughly 2 million m³ to meet increasing demand for sawnwood. With increased export markets, including those in Asia in 1997, Europe continues for the third year to be a net exporting region for sawn softwood.

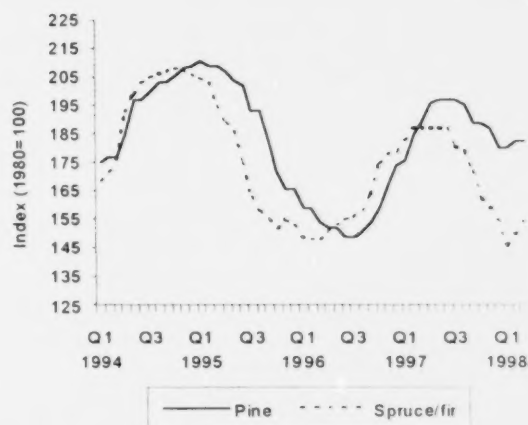
Japanese markets for European sawnwood increased strongly in 1997, by 71% in volume and 56% in value, to reach over 2 million m³ and \$645 million (note that a unknown, but probably small, percentage of this is hardwoods). Europe had a 17% market share of all Japanese sawnwood imports in 1997—an amazing growth from 2% in 1993. The booming Japanese market, and with it other Asian countries for which statistics were unavailable, has become segregated with some countries focusing on sawnwood, like Sweden, Austria and Germany, while others have exported more logs, like Finland and Denmark. Still there is no clear distinctions as Finland and Germany export both logs and sawnwood to Asia. It merits mention that more and more European countries are entering the Asian sawnwood market, including many countries in central and eastern Europe. Regrettably the Asian market is considerably weaker in 1998 as economies there suffer through a recession. A more detailed discussion of the Japanese trade appears in Chapter 4 with some consequences on the ECE region trade in 1998.

Following destocking at the mill in the beginning of 1996 when sawn softwood prices were low, demand picked up from some major importing European countries, like the United Kingdom, and with the temporary short supply, prices began to rise (graph 6.3.1). Prices continued to climb and peaked in mid 1997, but then as the sawmills had gathered momentum, and with some European demand met, plus weakening in the Asian markets in the latter part of 1997, the oversupply cycle came in to play—stocks rose and prices fell. Now in mid 1998 there has been a renewed upward movement of prices as noted on the graph and the cycle is starting again. A report from Fédération Française des Importateurs de Bois du Nord (FFIBN) confirmed this rising price trend for April and May 1998 also. The European Organization of the Sawmill Industry stated that although prices for some assortments/qualities were rising with increased demand in mid 1998, there was also a simultaneous increase in sawlog prices.

However the same market effects were not universal among exporting countries as relatively stable prices were reported by Austria and by the United Kingdom for their Russian imports. Russian

GRAPH 6.3.1

Swedish sawnwood price indices, 1994 to 1998



Source: Swedish Wood Exporters Association, 1998.

export prices to Japan have lowered according to recent reports, but remained higher than prices paid by European importers of Russian sawnwood. It should be noted that the qualities of sawnwood may be different and hence although all the prices are stated in dollars, the sawnwood may not be directly comparable in value; rather the intention is to show the effects of prices on sawnwood trade and vice versa.

According to *Timber & Wood Products*¹, first United Kingdom quarter imports were up 30%, but demand was slowing in the second quarter. According to an article on the website of the Finnish Forest Research Institute, sawnwood sales from Finnish and Swedish sawmills in the first quarter of 1998 had increased by 10% over the same period of 1997 due to strengthened economies in the European Union and the stronger dollar.

European imports of sawn softwood in 1997 rose strongly, by 7.7%, to 29.9 million m³, a volume below the 1994 peak of 32 million m³. The free movement of goods within the European Union continues to screen the direction of trade among the current 15 member countries.

The United Kingdom is the largest European importer and while import volumes increased dramatically, by 22% from 1996, they did not move up to the levels before 1995. According to COMTRADE, the United Nations database, 1996 imports came from the following countries in descending order by

¹ *TTJ Timber & Wood Products* magazine incorporated *Timber Trades Journal*, *Timber & Plywood Board News* and *Wood & Timber Construction*.

quantity: Sweden, Finland, Latvia, Russian Federation, Canada, Lithuania, Portugal, etc. The United Kingdom's imports of Canadian sawnwood have eroded over the past years due to phyto-sanitary requirements and competition from closer sources. According to trade reports in mid 1998, the United Kingdom and hence the total European imports from all sources, could decrease in 1998 due to a forecast slowdown in construction.

Italy's sawn softwood imports, like their hardwood imports, rebounded in 1997 and achieved a record 5.1 million m^3 . While most softwood imports originated in Austria, a small portion of Italy's imports came from Switzerland, which increased exports by 81% on the small volume of 134,000 m^3 ; as Italy is Switzerland's main market, export volumes are directly dependent upon, and have been constrained by, the exchange rate between the Swiss franc and the Italian lira.

Germany's imports increased in 1997, but only to regain 1995 levels and not the peak of 5.3 million in 1994. Neither actual data nor estimates were available for Europe's fourth largest importer, the Netherlands.

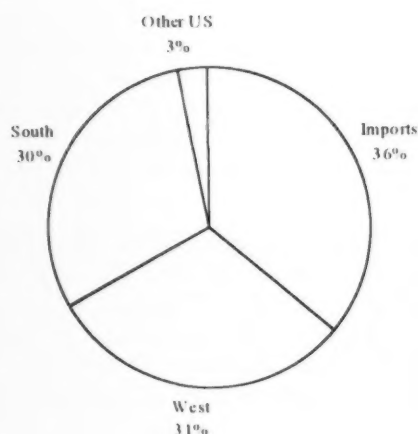
North American sawn softwood export surplus shrank in 1997 as the early effects of the Asian crisis were felt in the second half of the year. While United States exports continued their slow decline which started at the beginning of the decade, by 1.1% in 1997, Canadian exports ended their trend upwards at the 1996 record of approximately 50 million m^3 , and

fell by 4%, or 2 million m^3 , to 47.7 million m^3 in 1997. Trade journals indicated that Canadian shipments of construction sawnwood to the United States rose with the increase in housing construction, but that the Softwood Lumber Agreement between the countries continued to have a constraining effect on Canadian exports.

United States imports of sawn softwood fell by 1% in 1997, down to 42.5 million m^3 . According to COMTRADE, in 1996 the United States was the largest importer, buying 46% of the total sawn softwood imports; of that, 96% was imported from Canada. Following successful trial shipments of European sawnwood graded according to the Western Wood Product Association's grading standards in 1996, Finland and Sweden exported 37,000 m^3 to the United States in 1997. However that volume is smaller than Austria's exports of 51,000 m^3 in 1997, a dramatic increase from nothing in 1994. The Czech Republic, Lithuania and Germany also exported softwoods to the United States in 1997. In 1993 Russia exported 9 million m^3 to the United States, but that volume dropped to 1.3 million m^3 in 1996 before rising back to 5.4 million m^3 in 1997.

In the first quarter of 1998 the United States imported 8% more sawn softwood than in the first quarter of 1997. The majority is from Canada but the United States is also importing from some new sources (graph 6.3.2 and table 6.3.1).

GRAPH 6.3.2
United States sawn softwood supply, 1998



Source: Western Wood Products Association, 1998.

TABLE 6.3.1
United States sawn softwood imports,
first quarter 1998

	1000 m^3	% Change
Canada	9883	8
Europe		
Austria	17.2	943
Finland	9.4	186
Lithuania	4.2	800
Latvia	1.9	(none 1996)
Sweden	5.7	300
Latin America	227.8	2
New Zealand	39.6	18
Russia	0.2	-50
Other	314.9	15
Total	10,504	8

Note: % change is first quarter 1998 over the first quarter 1997

Source: Random Lengths Export, 1998.

United States imports from countries outside the ECE region are also expanding rapidly, albeit on small volumes. More and more radiata pine, despite stringent phyto-sanitary standards, is making its way

from Chile (283,000 m³ in 1997) and New Zealand (170,000 m³ in 1997). In 1997 Latin American softwoods were imported from Brazil, 388,000 m³, Mexico, 283,000 m³, and on much lower volumes, Argentina, Honduras, Uruguay, Bolivia and Colombia. Some smaller volumes were imported from African countries too. In January 1998, radiata pine imports were up strongly and the same ECE region countries had initiated shipments, with the addition of Latvia.

North American sawnwood prices peaked earlier than European prices and have been falling in 1998 (graph 6.3.3).

Russian exports of sawnwood increased slightly in 1997, by 4% to 4.5 million m³. It should be noted that exports in 1996 were the lowest since the beginning of the economic transition period in 1991.

The Baltic Countries continue to be a dynamic region and while their exports dominate, domestic consumption has increased and along with it imports, part of which are remanufactured from rough, unedged boards and upgraded for re-export. Thus some small amounts of re-exported sawnwood finds their way into the statistics (table 6.3.2).

TABLE 6.3.2

Baltic sawn softwood exports,
1992 and 1995-1997

	1992	1995	1996	1997	% Change 97/96
Estonia	37	283	485	621	28.0
Latvia	42	700	1286	2030	57.9
Lithuania	26	728	1046	847	19.0
Total	105	1666	2817	3498	24.2

Source: UN/ECE TIMBER database.

The decrease in Lithuanian exports in 1997, which apparently could be repeated in 1998, deserves explanation. According to the Lithuanian Center of Forest Economics, the export of sawnwood in the first 3 quarters of 1997 was equivalent to the same period in 1996 but then domestic harvesting was reduced from its previous high rates which had been deliberately boosted for phyto-sanitary measures against the spruce beetle. Bringing the annual cut back in line with sustainable levels resulted in a decrease in domestic log stocks at the sawmills, a decrease in sawnwood production, and the resulting decrease in export volumes for the year. Sawnwood exports to Germany, the principal trading partner, decreased in 1997 by 9% to 560,000 m³ while exports to the United Kingdom increased by 12%, to 140,000 m³. The Center forecasts a decrease in sawnwood exports again in 1998 due again to sawlog supply and increased domestic consumption.

GRAPH 6.3.3

North American composite sawn softwood prices,
1993 to 1998

Source: Random Lengths Export, 1998.

Lithuanian imports of roundwood increased by a factor of 5 in 1997, from 19,000 m³ in 1996 to 102,000 m³ in 1997. About 85% of the imported roundwood was softwood species with the majority coming from Russia (including neighbouring Kaliningrad) and Belarus.

The imports from Belarus could fall considerably during the second half of 1998 if new regulations barring exportation of logs greater than 13 centimetres in diameter are enforced. These regulations are intended to maintain a sufficient supply of large diameter logs for Belarus' sawmills. Exports of sawnwood will not be encouraged since boards wider than 15 cm or thicker than 14 cm are prohibited. All oak exports have likewise been prohibited, again to ensure satisfactory domestic supplies.²

Investments in Estonian sawmills have raised production capacity to 650,000 m³ which could be achieved with favourable market conditions in 1999 according to the Estonian National Forestry Board. Export destinations according to the Board are Germany, Belgium, Netherlands, United Kingdom, Ireland, Sweden and Finland. Sawnwood to Sweden and Finland is assumed to be for re-export. *Japan Lumber Journal* listed Estonia as the source of 1125 m³ of sawnwood--a small volume but a big increase on their 1996 export to Japan of 41 m³. Some sawmills

² A separate report on trade flows of sawnwood and roundwood in Belarus is intended to be completed in autumn 1998. Copies are available upon request from the secretariat.

are using Scandinavian export marketing services to produce sawnwood to order, i.e. standard sizes and qualities and kiln-dried. Diversification is occurring and more value-added products are produced, like joinery and furniture.

6.4 North American developments

The "Softwood lumber agreement between the Government of the United States of America and the Government of Canada" entered into its second year in 1997 and is to continue until 2001. The Agreement was detailed in the last Review, but basically it limits duty-free Canadian exports to the United States at 34.7 million m³. Thus far Canadian exports have extended each year beyond the limit, despite the additional C\$50 to 100 paid per 1000 board feet.

Some of the Canadian sawnwood volumes turned away from the United States found markets in Asia, but in 1998 with the weakness in Asia, sawmillers are scaling back production as domestic markets cannot consume the excess capacity.

A way around the quotas was for Canadian mills to invest in added-value processing as these products are not restricted. In an interesting twist, as "building components" are not subject to the same duty as softwood lumber (sawnwood), a new practice was developed of drilling a hole into each 2x4 stud so that it escaped the quotas of the agreement.

6.5 European developments

Nordic sawmillers have made inroads into new markets, for example the United States as mentioned before. In 1998 some members of the Swedish Wood Exporters' Association have found new markets in the United Kingdom for Forestry Stewardship Council labelled sawnwood. Currently there are no statistics available on the volume or value of these sales of sawnwood from forests certified to be sustainably managed.

Two Nordic forest products companies, Enso of Finland and Stora of Sweden have announced a merger which would create the world's largest wood products producer with a combined sawnwood capacity of about 3 million m³ per year. This is about 1 million more than the second largest Nordic producer, UPM-Kymmene which merged last year. In addition Enso/Stora would have a combined capacity of 13 million tonnes of paper and paperboard.

The United Kingdom market for sawn softwood could slow in 1998 with increasing interest rates. Latvia became the second source of supply in 1997, behind Sweden and supplanting Finland. More

worrisome than changes in supply sources is the trend noted by the *World Wood Review* is substitution of plastic and metal in windows and doors, as well as the substitution of composite wood products for formerly solid wood applications.

A large German sawmill has been built on the Baltic Sea to take advantage of sawlog imports from the Nordic and Baltic Countries, as well as 30% domestic logs. The mill capacity is 400,000 m³ of sawnwood output per year according to *Timber & Wood Products*, of which 90% may be dried. Principal markets are domestic and the United Kingdom.

While Belarus may not be typical of other countries in transition, a glimpse into its sawmilling industry is enlightening. Privatization has been occurring through passage of 80% of the country's forest products companies from the control of the Ministry of Forestry to the Bellesprom Concern. Many companies had been privatized through purchase by vouchers by management and workers in order to form joint-stock companies. In 1997 and 1998, some of these companies were made public again when they reverted back to local authorities.

In June 1998 a chipper-canter sawmill near the Belarus capital, Minsk, was sawing 10 to 30 centimetre diameter pine logs which had been sorted at the forest landing. The output was air-dried sawnwood, of which 50% was exported to Germany. This mill which is owned and operated by the Ministry of Forestry priced its exports according to the indicative prices set by the Ministry of External Foreign Relations, which is responsible for setting the prices of all export commodities. Considering that the grade may change appreciably with the specific market requirements, the company received \$125 per m³ for export grade, \$60 per m³ for domestic grade and \$20 per m³ for local use sawnwood. Export markets were said to be good and with their small diameter input, the new export width restrictions would not be of concern.

6.6 Russian Federation developments

Russian forest products industry organization continues to undergo transformation with Rosexportles, the largest supplier dividing into Rusexportles and Corporation Rosexportles. In order to halt declining sales to Japan, a council to coordinate export strategies was created of nine leading Russian timber exporters (including Rusexportles, Rosexportles and Exportles). According to a spokesman for Rosexportles quoted in the *Timber & Wood Products*, prices for timber exported to Japan have fallen 15% due to "enigmatic internal reasons".

CHAPTER 7

SAWN HARDWOOD SUPPLY, TRADE AND CONSUMPTION

Highlights

- Perhaps ending the long downward slide, European consumption of sawn hardwood rose slightly in 1997, due to increased imports.
- United States sawn hardwood consumption continued to climb in 1997 due to record production levels.
- United States sawn hardwood exports increased strongly in 1997 to both Europe and Asia.
- European imports of primary *tropical* products has been falling, but it reversed the trend in 1997.
- When secondary tropical forest products are added to the values of primary products, Europe and the United States become major importers.
- Since 1997, the Asian crisis drove down prices of some primary tropical products, by as much as half, by mid 1998.
- The Asian crisis was having a profound effect on the whole hardwood trade in 1998.

7.1 Consumption

In the medium term, Europe's consumption of hardwoods has been falling, for reasons which are not yet fully clear. However in Europe in 1997, sawn hardwood consumption came back near the 1995 level with the rise by approximately 1 million m³ to 16.6 million m³ (graph 7.1.1). The increased consumption was mainly attributed to increased imports, as production increased only 100,000 m³, back to near the 1995 level. It remains to be seen if this rise is a new trend. Nevertheless, the consumption rise was well beyond the Timber Committee's forecast increases for 1997 and 1998.

Strongest increases in apparent consumption came from France, which marked Europe's highest consumption at 2.7 million m³, closely followed by Italy at 2.6 million m³. As these two countries' housing construction declined in 1997, the demand for hardwoods could have been linked more to furniture manufacturing and millwork, as well as packaging and sleepers.

Germany has increased consumption of hardwood furniture components and Italy is the largest producer in Europe according to a Sasnil trade show

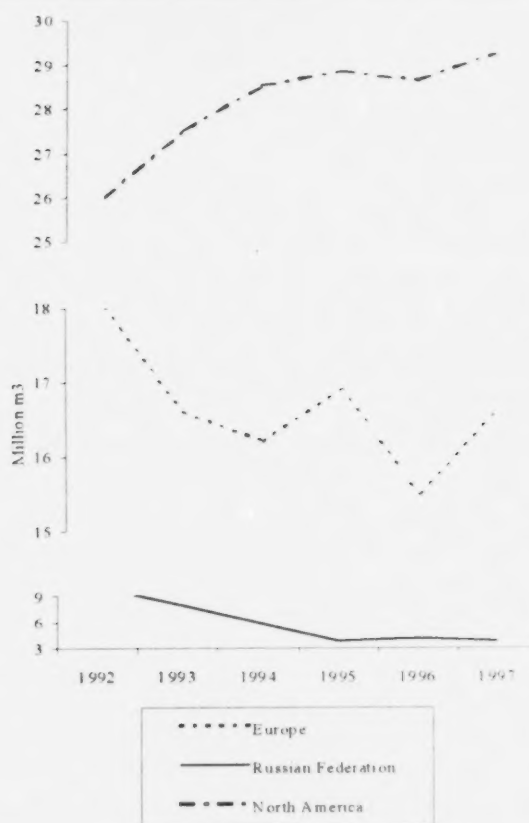
press release. Trade is on the rise of hardwood dimension, i.e. rough cut-to-size boards and panels for further processing; this offsets some sawnwood trade and may be one reason for the apparent decrease in hardwood consumption.

Consumption in Spain moved up 32% over a poor 1996, and achieved 1.6 million m³. The Spanish Timber Importers' Association reported that imports of hardwoods rose considerably in 1997. In 1996, white oak sawnwood imports were sourced from the United States (75%) and France (15%). Half of Spanish doors are made from white oak, 26% from southern yellow pine and 2% from other wood species according to the American Hardwood Export Council.

United States sawn hardwood consumption continues to rise, up 2.6% in 1997 to 29 million m³. Consumption of hardwoods is not only driven by the strong residential and commercial construction markets, which includes a growing demand for solid wood flooring, but also the demand for pallets and other packaging. Part of the increased consumption came from imports which doubled to reach 1 million m³, as production went up only slightly.

Sawn hardwood consumption in the *Russian Federation* was at 3.7 million m³, roughly a third of the 1992 consumption.

GRAPH 7.1.1
Consumption of sawn hardwood, 1992 to 1997



Source: UN/ECE TIMBER database.

7.2 Production

The steady decline in production of sawn hardwoods in Europe may have reached the bottom as 1996 and 1997 were near the same level of 12.7 and 12.8 million m³ respectively (table 7.2.1). France and some other large producers in Europe reacted to new demand through imports as they had no production increases.

The European Organization of the Sawmill Industry stated in their annual report that the pressure asserted on European forests for beech could lead to future imbalances in species diversities. Beech, like some other light coloured hardwoods, is finding favourable market demand, not only in Europe, but also in America and in Asia. Oak was in demand for

wine barrels and demand rose with the good harvest of grapes in 1997 coupled with the popularity of ageing in oak.

In the United States, sawn hardwood production increased slightly to meet both a growing export demand and domestic demand. United States hardwood sawmills have been forced to increase efficiency, both production and marketing efficiency, because of a combination of competition from other mills, competition from softwoods and composite products, rising stumpage costs and rising labour costs. According to the USDA Forest Service, the mills are getting bigger and have more and more advanced technology for improved sawing efficiency. In addition sawmills continue to integrate into value-added processing.

While sawn hardwood production in the *Russian Federation* continues to fall, other countries in transition have reversed the trend. Poland responded to increased export and domestic demand and in 1997 production increased by 15% to 0.9 million m³, not yet regaining the 1995 level. Other central and eastern European countries which increased production were Croatia and Slovakia. This cannot be construed as a general trend as most other countries in transition had reduced production again in 1997.

7.3 Trade--temperate zone

European net trade of sawn hardwoods fell in 1997 as imports swelled by 15% to reach 6.9 million m³ and exports fell slightly (table 7.3.1). Italy recovered from the 1996 slump and with 1.8 million m³ of hardwood imports moved back to the 1995 level. France also increased imports, by 31%, to return to the higher level of the early 1990s.

The major jump in European imports occurred in Spain, where imports in 1997 rose 75% to reach 0.9 million m³. Spain's economy and with it the construction sector was stronger in 1997, up 6% from 1996, and significant hardwood sawnwood was imported from France, Germany and North America. In the first quarter of 1998, Spain again increased hardwood imports, notably from the United States which rose 45% to 45,800 m³ for sawnwood, over the first quarter in 1997 according to the United States Bureau of the Census. White oak, used in millwork, cabinetry and flooring, represented 85% of the 1998 sawnwood imports, and was also prevalent in log and veneer imports too.

European exports have been rather steady over the last decade and again in 1997 there was little change reported. Some countries in transition, for example Poland and Hungary, found markets for

TABLE 7.2.1
Production of sawn hardwood, 1994 to 1997

	1994	1995	1996	1997 ^a	Change 1996 to 1997	
					Volume	Per cent
	(1000 m ³)					
EUROPE	13020	13402	12713	12824	111	0.9
of which						
France	3000	3021	3094	3100	6	0.2
Turkey	1703	1829	1766	1766	...	...
Germany	1202	1180	1144	1048	-96	-8.4
Italy	1000	1050	900	963	63	7.0
Poland	800	1050	780	900	120	15.4
Romania	860	900	769	746	-23	-3.0
Spain	760	755	702	702	...	...
Croatia	474	478	484	505	21	4.3
Portugal	426	481	481	481	...	...
Czech Republic	230	270	305	293	-12	-3.9
Belgium-Luxembourg	284	270	270	270	...	...
Slovakia	300	219	203	266	63	31.0
Other countries	1981	1899	1815	1785	-31	-1.7
Russian Federation	6080	3975	4383	3900	-483	-11.0
Canada	1002	1093	1000	1000	...	...
United States	29054	29344	29650	29972	322	1.1
North America	30056	30437	30650	30972	322	1.1

^a Preliminary.

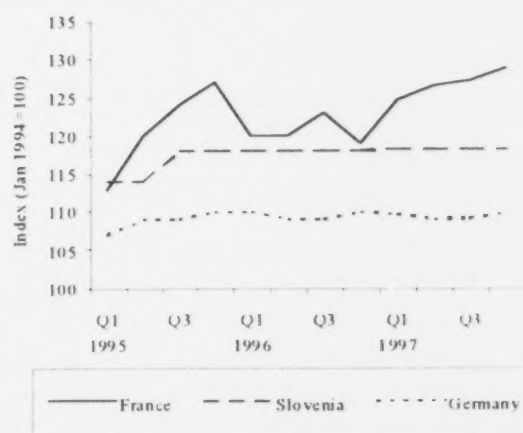
hardwoods in western countries like Germany. Some quantities of hardwoods were also exported to Asia, in sawnwood, veneer and log form.

Prices for European hardwoods have increased in some countries, for example France, but were stable in other countries in 1997, for example Germany (graph 7.3.1). The European Organization of the Sawmill Industry noted beech prices rose 5 to 25% in 1997 depending on the quality/grade.

The evolving situation of hardwood trade in the countries in transition is rather heterogeneous as countries have different rates of economic progress. However some insight can be given into one country's trade in sawn hardwoods. Slovakia's exports of sawn hardwoods in 1997 fell by 64% to 38,000 m³, as more was converted into furniture for domestic and export markets¹. In value terms, Slovakian furniture exports increased 15% from 1995 to 1996, before decreasing slightly in 1997. The Forest Research Institute in

Slovakia forecasts greater consumption yet, whenever the suppressed demand for housing begins to be met.

GRAPH 7.3.1
European beech sawnwood price indices, 1995 to 1997



Source: "Forest Products Prices, 1995-1997," *Timber Bulletin*, UN-ECE/FAO, 1998

¹ For reference Slovakia's sawn softwood consumption increased 167% from 1996 to 1997 to reach 504,000 m³.

TABLE 7.3.1
Exports and imports of sawn hardwood, 1994 to 1997

	1994	1995	1996	1997 <i>a</i>	Change 1996 to 1997	
					Volume	Per cent
	(1000 m ³)					
EXPORTS						
EUROPE	3279	3214	3229	3181	-47	-1.5
of which :						
France	825	761	754	696	-58	-7.7
Croatia	405	402	402	402	...	...
Romania	290	252	331	325	-6	-1.8
Germany	312	320	304	313	9	3.0
Poland	178	246	228	279	51	22.4
Hungary	153	130	150	163	13	8.7
Belgium-Luxembourg	171	139	158	152	-6	-4.0
Netherlands	171	135	142	142	...	...
Slovenia	114	114	114	114	...	...
Italy	70	79	45	103	58	128.9
Other countries	591	636	600	493	-108	-18.0
Canada	803	769	859	1022	163	19.0
United States	2368	2495	2692	2890	198	7.4
North America	3171	3264	3551	3912	361	10.2
IMPORTS						
EUROPE	6397	6659	6018	6937	919	15.3
of which :						
Italy	1739	1777	1576	1760	184	11.7
Spain	525	719	514	900	386	75.0
Belgium-Luxembourg	602	532	634	737	103	16.3
Germany	676	708	553	642	89	16.1
United Kingdom	514	501	575	611	36	6.3
Netherlands	705	631	583	583	...	...
France	482	519	425	558	133	31.3
Austria	156	154	165	161	-4	-2.4
Portugal	104	138	144	144	...	...
Sweden	101	135	109	116	7	6.4
Other countries	793	845	741	726	-15	-2.0
Russian Federation	7	7	8	18	10	125.0
Canada	843	892	928	1024	96	10.3
United States	742	698	518	1096	578	111.6
North America	1585	1590	1446	2120	674	46.6

^a Preliminary.

In discussing *North American* exports of sawn hardwoods, it should be noted that although it is a net exporting region, domestic consumption has the ability to offset exports when mills are running near capacity. Nevertheless, exports in 1997 achieved record levels to Europe and Asian destinations as well. Exports to Asia were stagnant to Japan at a value of \$135 million,

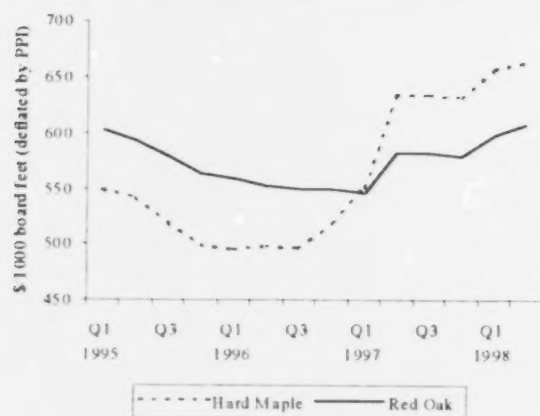
but they almost doubled to China (including Hong Kong) to \$75 million. However Asian shipments are much smaller than those to the European Union which attained \$557 million in 1997, up from \$445 million in 1996 according to the USDA Foreign Agricultural Service. Canada appears to be the largest export market for the United States, but much of that

sawnwood is re-exported to Europe and Asia. Depending on the location of the sawmill, Canadian shipping rates are sometimes lower than those in the United States.

In the United States, hardwood prices rose in early 1997, especially for the popular, light-coloured woods like maple and cherry (graph 7.3.2). Cherry prices were climbing in early 1998 as a significant portion of the resource is on eastern National Forests which like their western counterparts, have reduced harvesting due to environmental pressures. High domestic demand drove up prices for cherry and other species, as did export demand. Exports have increased roughly 70% in volume over the last decade (specifically 68.7% from 1987 through 1997).

GRAPH 7.3.2

United States sawn hardwood prices, 1995 to 1998



Note: Prices for 4/4 inch thick, 1 common grade, Appalachian Region hard maple and red oak sawnwood. Deflated by the United States producer price index with a 1982 base.

Source: *Hardwood Market Report*, 1998.

While United States hardwood exports remain stable at approximately 10% of production, they have roughly doubled their share of all United States primary wood exports, to 20% based on value (table 7.3.2).

Part of the success in United States hardwood exports is through efficiencies gained in creating larger marketing networks. While some hardwood sawmills have grown to the capacity of the resource within affordable trucking distances, larger companies have been building or buying other sawmills to increase the corporation's production. Some corporations also buy sawnwood from other mills, sometimes graded, but often ungraded, green and mill run. After grading, sorting, drying and regrading, with remanufacturing to improve some boards' grade, the sawnwood is then

sold under the corporation's name and using their larger marketing network.

TABLE 7.3.2

United States sawn hardwood exports, 1987 vs 1997
(millions)

	1987	1997
Exports, m ³	1.7	2.9
Production m ³	19.2	30.0
% of production	9	10
Exports \$	475	1432
Total wood exports \$	3950	7193
% of total exports	12	20

Source: USDA Foreign Agricultural Service, 1998.

7.4 Trade--tropical zone

This section diverges from sawnwood and includes other products from the tropical forests, i.e. logs, plywood and further-processed wood products. Chapter 4 on "Effects of the Asian crisis on ECE region forest products markets" is focused on Japan and thus Japanese production and trade is not repeated here. As the Timber Committee cannot attempt to cover all timber markets, some of the following information was graciously supplied by the International Tropical Timber Organization (ITTO) secretariat.

(i) Consumption of tropical forest products by "consumer" countries²

Apparent consumption of tropical forest products in 1997 was essentially unchanged from 1996 (graph 7.4.1). However next year's review will show a steep decrease for Japan, the largest consumer of tropical wood products. Note that for the sake of the graph, forest products were logs, sawnwood, veneer and plywood.

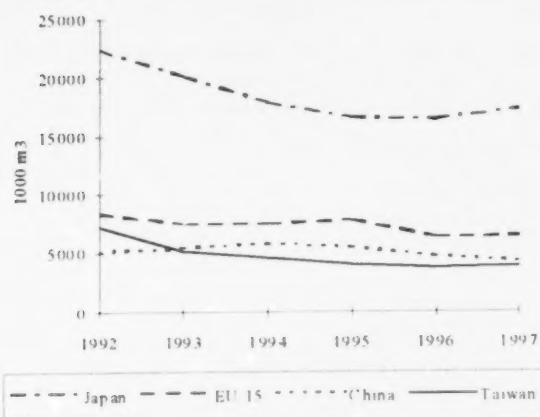
(ii) Imports of tropical forest products by "consumer" countries

European Union imports increased slightly in 1997 by 2%, but in general EU imports and consumption have been falling in volume (graph 7.4.2). In contrast to the rise in Japan's tropical imports in 1997, Japan will show a decrease in 1998 based on mid-year statistics.

² The ITTO divides its membership into tropical timber "producers" and "consumers" although overlap exists.

GRAPH 7.4.1

Consumption of tropical wood products*, 1992 to 1997



*Tropical wood products here are logs, sawnwood, veneer and plywood together.

Source: Annual Review and Assessment of the World Timber Situation, 1997, ITTO, 1998.

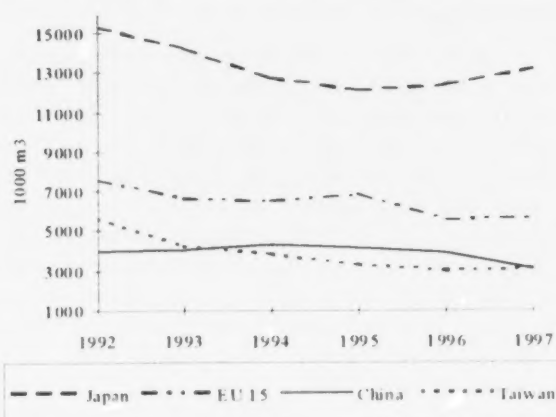
In value terms, primary tropical forest products imported to the European Union countries decreased from 1995 to 1996 (data were not available for 1997) (table 7.4.1). This is consistent with the graph of volumes.

However, when the tropical value-added products' imports are considered, for example the increasing trade of tropical millwork and furniture, the picture is different, both as regards the direction of the trend and the relative importance of different markets. In particular the European Union and the United States emerge as major destinations for tropical products (table 7.4.2).

In Europe there has been an important increase in imports of tropical value-added products like joinery, millwork and furniture (especially garden furniture) according to the Fédération française des bois tropicaux et américains (FFBTA). From 1995 to 1997, French imports of these latter products increased by 50% in value. Contrary to some other European countries, France's imports of tropical wood improved in 1997 to 1.4 million m³ composed of 790,000 m³ of logs, 459,000 m³ of sawnwood and 193,000 m³ of plywood and veneer (note that some of these imports are re-exported to other European destinations). Of the 459,000 m³ of sawnwood imported in 1997, the majority came from Africa, 210,000 m³, second South America, 193,000 m³ and third Asia, 56,000 m³. According to *Le Bois National*, a slight increase of tropical sawnwood imports are forecast for 1998, to 530,000 m³ because the French market is less negatively influenced by environmental pressures.

GRAPH 7.4.2

Imports of tropical wood products*, 1992 to 1997



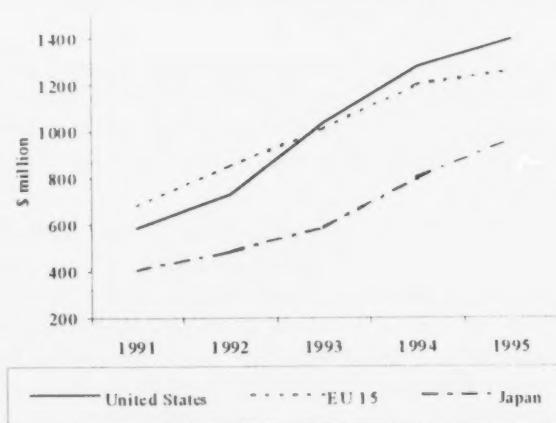
*Tropical wood products here are logs, sawnwood, veneer and plywood together.

Source: Annual Review and Assessment of the World Timber Situation, 1997, ITTO, 1998.

Indeed, the augmentation in trade in secondary wood products has succeeded, in part thanks to government policies promoting increased value-added processing and trade as well as low labour, raw material and manufacturing costs (graph 7.4.3). As data eventually become available for 1998, it could be expected that the intra-Asian trade of secondary products will fall, however in mid 1998, furniture exports from Malaysia to the United States were benefiting from the devalued Malaysian ringgit.

GRAPH 7.4.3

Imports of secondary processed wood products from ITTO producer countries, 1991 to 1995



Source: Annual Review and Assessment of the World Timber Situation, 1997, ITTO, 1998.

TABLE 7.4.1
Value of some ITTO countries imports of tropical wood products, 1995 to 1996
\$ million

	1995	1996	% change 1996/1995	% share of total
Japan	4472	4635	3.7	41.4
European Union 15	2953	2697	-8.7	24.1
Taiwan	1142	1009	-11.7	9.0
China	1263	964	-23.7	8.6
United States	771	791	2.6	7.1
Others	1271	1092	-14.8	9.8
Total	11,872	11,188	-5.7	100

Source: ITTO Annual Review and Assessment of the World Timber Situation 1997, 1998.

TABLE 7.4.2
Value of imports of secondary processed tropical wood products, 1993 to 1995
\$ million

	1993	1994	1995	% change 1995/1994	% share of total
United States	1037	1280	1393	8.8	35.2
European Union	1010	1198	1256	4.8	31.7
Japan	583	799	964	20.7	24.4
China	17	23	34	47.8	0.9
Others	197	252	310	23.0	7.8
TOTAL	2844	3552	3957	11.4	100

Note: No data were available after 1995. European Union 12 for 1993 and 1994 and European Union 15 for 1996.

Source: ITTO Annual Review and Assessment of the World Timber Situation 1997, 1998.

(iii) Exports of tropical forest products by "producer" countries

The tropical timber exports continue to be oriented away from logs and domestic consumption seems to be taking some of these volumes as they are not showing up in the exports of sawnwood and plywood. Nevertheless, total ITTO producers tropical log production has fallen by 3.6% from 1993 to 1997. Declines were heaviest in the Asia Pacific region, by 11%, contrary to increased log production, but on lower volumes, in Africa and Latin America.

Another possibility would be that these volumes are being transformed into value-added products which as just noted have been increasing, but which would not be reflected in the primary products export statistics for 1997 (table 7.4.3). Based on reports during the first half of 1998, this scenario will change significantly in next year's Review as the full effects of the economic crisis become visible in the annual statistics.

(iv) Production of tropical forest products by "producer" countries

In general, production of tropical forest products rose modestly in 1997 for logs, sawnwood, veneer and plywood (table 7.4.4). Again a decrease is forecast for 1998.

(v) Apparent consumption of tropical forest products by "producer" countries

In total, tropical timber producers increased domestic consumption in 1997, especially in Asia, and especially of veneer, the lowest volume primary product (table 7.4.5). New applications continue to be found for MDF in furniture, millwork and mouldings where all exposed parts require a veneer (or other) surface. Therefore consumption of veneer has increased and it is later exported as a secondary product. The decrease in plywood consumption in 1997 is forecast to continue in 1998.

TABLE 7.4.3
Tropical forest products exports, 1993 to 1997
(thousand m³)

		1993	1994	1995	1996	1997
AFRICA	logs	3589	4075	3816	3430	3988
	sawnwood	1046	1351	1416	1156	1245
	veneer	204	233	283	272	246
	plywood	55	43	78	76	91
ASIA PACIFIC	logs	13676	12753	11243	10272	9641
	sawnwood	6459	5606	5007	4423	3911
	veneer	753	688	661	723	835
	plywood	12112	11280	11607	11472	12180
LATIN AMERICAN/CARIBBEAN	logs	344	736	1292	535	951
	sawnwood	1449	1783	1648	1651	1666
	veneer	96	137	123	205	208
	plywood	699	815	724	689	692
TOTAL	logs	17610	17564	16352	14236	14580
	sawnwood	8984	8740	8071	7229	6821
	veneer	1053	1058	1067	1200	1289
	plywood	12866	12137	12410	12237	12963

Note: Volumes differ from FAO statistics as ITTO coverage is approximately 90% of tropical exporters by volume

Source: Annual Review and Assessment of the World Timber Situation, 1997, ITTO, 1998.

TABLE 7.4.4
Tropical forest products production, 1993 to 1997
(thousand m³)

		1993	1994	1995	1996	1997
AFRICA	logs	9265	10554	9888	9844	9701
	sawnwood	2141	2293	2138	2118	2132
	veneer	340	361	393	443	431
	plywood	160	167	224	246	258
ASIA PACIFIC	logs	114224	111479	105853	102347	101997
	sawnwood	36769	35332	35468	33525	33066
	veneer	2336	2258	2429	1435	1435
	plywood	13626	13202	13624	13331	13947
LATIN AMERICAN/CARIBBEAN	logs	54727	57251	58774	59295	60065
	sawnwood	22708	22818	23197	24031	24740
	veneer	474	518	512	504	522
	plywood	1795	2239	2259	2350	2385
TOTAL	logs	178216	179284	174514	171487	171763
	sawnwood	61618	60444	60803	59674	59938
	veneer	3150	3137	3333	2382	2388
	plywood	15581	15608	16107	15927	16590

Note: Volumes differ from FAO statistics as ITTO coverage is approximately 90% of tropical exporters by volume.

Source: Annual Review and Assessment of the World Timber Situation, 1997, ITTO, 1998.

TABLE 7.4.5
Tropical forest products consumption, 1996 and 1997
(thousand m³)

		1996	1997	% change 1997/1996
AFRICA				
	logs	6417	5715	-10.9
	sawnwood	968	896	-7.4
	veneer	171	185	8.2
	plywood	174	170	-2.3
ASIA PACIFIC				
	logs	95194	96219	1.1
	sawnwood	32315	33539	3.8
	veneer	985	1116	13.3
	plywood	2011	1910	-5.0
LATIN AMERICAN/CARIBBEAN				
	logs	58796	59151	0.6
	sawnwood	22983	23626	2.8
	veneer	342	353	3.2
	plywood	1717	1742	1.5
TOTAL				
	logs	160407	161084	0.4
	sawnwood	56265	58062	3.2
	veneer	1497	1654	10.5
	plywood	3902	3822	-2.1

Source: ITTO Annual Review and Assessment of the World Timber Situation, 1997, ITTO, 1998.

The rest of this section looks at the individual product sectors.

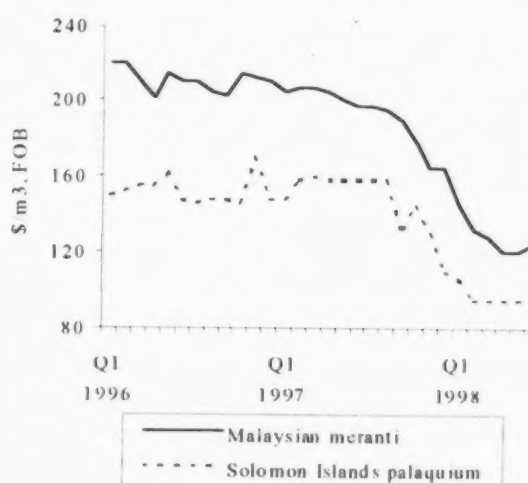
(vi) Tropical log trade

Trade in tropical logs within Asia slowed during 1997 and then fell steeply in the fourth quarter of 1997 and the first quarter of 1998. In mid 1997 Asian log prices began a free fall which ended in early 1998 at half their former value (graph 7.4.4).

African sales of logs to Asia boomed in 1996 and 1997, but the boom stopped in 1998 according to an article in the *Timber & Wood Products*. The currency devaluations in Asia put downward pressure on the price of imported African logs, but in Europe, prices have not been reduced to the same extent.

IMF requirements for the initial aid package to Indonesia opened log exports, formerly officially banned to protect domestic sawnwood and plywood manufacturing. Logs can be exported if two conditions are met: 1. that sawmills and plywood mills receive adequate supply; and 2. that logs are sourced from sustainably managed forests and so labelled.

GRAPH 7.4.4
Tropical log prices, 1996 to 1998



Source: Market News Service, ITTO, 1998.

Malaysia banned the import of logs, sawn timber and plywood from Indonesia in January 1997 to help the Indonesian government prevent smuggling of timber products to avoid high export taxes. But in 1998 Malaysia lifted the ban.

In 1997 South Korea was the third largest importer of logs in the world and the fourth largest consumer of tropical sawnwood and plywood. Since the fourth quarter 1997, Korean log imports in 1997 have fallen and were down sharply in 1998 (a large percentage is not tropical, but rather radiata pine).

The import of logs by Korea in the first quarter of 1998 totalled 1.1 million m^3 which is only 60% of that for the same period of 1997. By June the hardwood veneer log stocks had been depleted and plywood mills were either buying logs or reducing production further, or both. Despite a government elimination of the duties on log imports, sawmills had bought even less logs and most had reduced production substantially.

In order to protect natural forests, the State Forestry Administrative of China intends to set aside 60% of the forest land in state-owned forests for ecological benefits and felling in these forests will be stopped, according to the ITTO Market News Service. By 2000, the log production of the state-owned forest region is forecast to fall 43%, to 13 million cubic metres, from current 23 million cubic metres. The reduction in sawlogs and veneer logs will have a drastic impact on the domestic manufacturer. In order to make up for the deficiency, China will become more dependant on log imports.

(vii) Tropical plywood trade

Tropical plywood markets in the second half of 1997 and the first months of 1998 have been strongly affected by the economic and financial crisis in Asia. Demand is weak, despite reduced production levels stocks are rising and prices have fallen. Substitutes, notably OSB, are gaining market share.

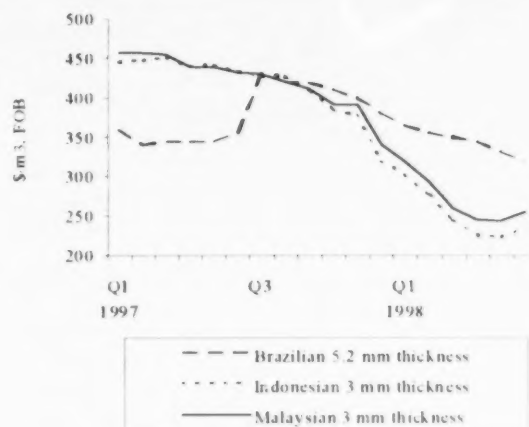
The production and price of Indonesian plywood had gone down since mid 1997 because of weak demand (graph 7.4.5). Plywood to China sold at \$220 per m^3 in February 1998, about half its average price last year. In Korea, the price of Malaysian plywood in mid 1998 is \$220, about half of the \$420 price before the economic crisis and devaluation of the ringgit. In 1997, peninsular Malaysian plywood exports decreased 21.9% in volume to 286,000 m^3 and by 14.0% in value to RM338.1 million.

Plywood prices to Europe and the United States have also dropped by about 30% since late January 1998. In France, tropical plywood prices have fallen from \$475 per m^3 in March 1996 to \$455 in March

1997 and down to \$255 per m^3 in March 1998 (for BB/CC grade, 3 millimetres thickness) according to *Le Bois National*.

GRAPH 7.4.5

Tropical plywood prices, 1996 to 1998



Source: Market News Service, ITTO, 1998

Brazilian plywood prices rose in mid 1997 but have fallen below previous prices in mid 1998 due to price competition from Asian manufacturers.

In Korea in April 1998, plywood mills were operating 3.5 days a week at only 55% of capacity and other panel mills at about 65% of capacity according to the ITTO Market News Service. Nevertheless, stocks have risen to approximately 2 month's worth of the reduced production. Imports in the first quarter of 1998 were 124,000 m^3 , down 64% from the first quarter of 1997. In April, imports were about half of the domestic production level of 54,000 m^3 . Plywood wholesalers in an effort to stimulate sales, and reduce stocks, have lowered prices below factory costs.

For low value construction purposes, Korea mills have produced "combipanel" in 9 to 18 millimetres thickness with a hardwood face and back and a radiata pine core. But since mid 1997, when the domestic construction market collapsed, production has reduced considerably. Mills are having difficulties establishing export credit due to high interest rates. Freight charges for a 20-foot container to a British port have increased from \$920 in December 1997 to \$1100 in April 1998.

Brazilian plywood manufacturers faced intense competition from Asian producers in 1998 and reportedly cut production rather than lowering prices. According to *Maskayu*, Brazilian plywood has lost its former Asian market share, but sales to the United States and the Middle East remained constant. The

domestic market was weak and highly contested by Brazilian producers due to loss of former export markets.

(viii) Tropical sawnwood trade

Peninsular *Malaysian* exports of sawn timber declined in 1997 by 23% in volume to 893,000 m³, and by 5.4% in value (in ringgits) over 1996 (note that values reported in local currencies which have devalued significantly can disguise the real fall in revenues).

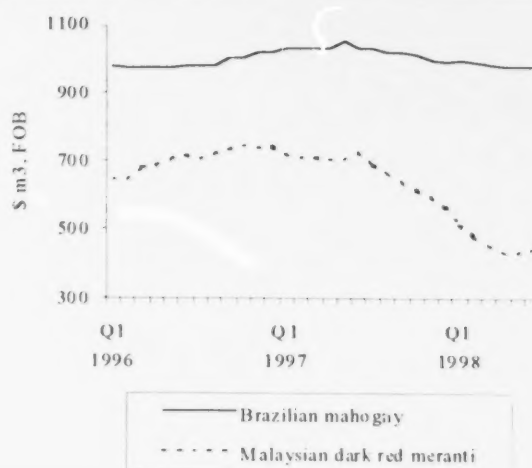
The Malaysian government reduced export levies on rough and semi-manufactured sawnwood and veneer in May 1998 in order to spur exports which had been constrained by both the economic slowdown and higher export fees. Rubberwood, which is in higher demand for its wood than its latex, and which is heavily used in furniture manufacturing, maintained its previous export levy and quota "to ensure sufficient supply for the local value-added processing industry" according to *Maskayu*.

French imports of Malaysian sawnwood have fallen from 47,000 m³ in 1993 to 19,000 m³ in 1996 due to the prejudice against tropical wood and a rising prices in 1993 and 1994. As the Malaysian ringgit has strongly devalued, from 2.30 French francs in July 1997 to 1.60 French francs in December 1997, the Fédération française des bois tropicaux et américains (FFBTA) has forecast increased imports of sawnwood, plywood and veneer from their present low levels.

The Association technique internationale des bois tropicaux (ATIBT) notes that the *price* of Malaysian sawn meranti in France has fallen from \$215 per m³ in March 1996 to \$205 in March 1997 and down to \$110 to 140 in March 1998 (for SQ and better grade) (graph 7.4.6). In contrast, Brazilian mahogany, which is primarily exported to the United States and Europe, has seen little price fluctuation over the last years.

In early 1998 the Malaysian sawnwood export market was finding strength in some EU countries, specifically Belgium and Italy. However, the Netherlands, United Kingdom and Germany reduced imports. Shipments to the Middle East and Asian destination continued falling too.

GRAPH 7.4.6
Tropical sawnwood prices, 1996 to 1998



Source: Market News Service, ITTO, 1998.

(ix) Trade in secondary processed wood products

In *Korea*, both the construction and furniture sectors were performing poorly in mid 1998. Construction permits for the period of January through April, 1998 dropped by 70% for commercial and factory sites and by 53% for housing, compared to the same period of last year. According to *Tropical Timbers*, 175 housing construction companies went out of business in the first quarter of 1998. ITTO reported that the furniture sector is in a worse situation: 8 of the 10 largest furniture manufacturers were under receivership or closed.

In *Malaysia*, mouldings exports increased in 1997 over 1996 by 14.0% in volume to 215,000 m³. Exports of furniture continued to grow in 1997, with exports from January through October up 17.0% over the same period in 1996. Heaviest importers were the United States representing 38.5% of exports for RM768 million, up 14% and Japan, while down 3% from 1996, was about half of the United States value.

CHAPTER 8

WOOD-BASED PANELS SUPPLY TRADE AND CONSUMPTION

Highlights

- *European* consumption of wood-based panels, mainly particle board, increased in 1997 to record levels
- In *North America*, consumption expanded slightly in 1997 at a much slower pace than in 1996.
- In the *Russian Federation* wood-based panels consumption has declined sharply by 70% since 1992, but thanks to active export markets, production showed an upturn in 1997.
- Production of OSB continued to increase in *North America*; as OSB capacity expands faster than demand the result has been a steep fall in prices.
- *United States* apparent consumption of plywood fell as a result of major production decreases and rapid substitution by OSB.
- During 1997 developments in the tropical hardwood plywood sector have been dominated by the Asian crisis.
- Apparent consumption of MDF in *Europe* was 0.94 million m³ higher than in 1996

8.1 Overview

Wood-based panels consumption in *Europe* increased by 6.9% in 1997 following the slight drop of 1.9% in 1996, to the record level of 44.68 million m³ (table 8.1.1). Important production increases were recorded in many countries, and export markets were active. Since the depressed year of 1992, apparent consumption has increased by 19%. However, the overall economic activity and the demand from end use sectors still needs to strengthen for a sustained growth of the industry. Particle board is the main panel in *Europe* with 72.6% of total consumption, of which oriented strand board (OSB) now represents some 2%, followed by fibreboard 13.9%, of which medium density fibreboard (MDF) is estimated at some 84%, and plywood 13.5%.

In *North America*, consumption expanded slightly by 1% in 1997 to 48.52 million m³, at a much slower pace than in 1996 when it increased by 8.1%. Continued fallback of softwood plywood production and consumption has been offset by increases of OSB and at a lesser extent of MDF. The oversupply situation of OSB which occurred in 1996, when capacity developed faster than demand, has continued.

OSB prices recovered moderately by the end of 1997, but then dropped again in 1998.

Wood-based panels consumption in the *Russian Federation* slightly dropped in 1997 by 14%, compared to the 26.3% decline in 1996, to 2.13 million m³. The sharp decline in consumption since 1992 is equivalent to 70%.

8.2 Particle board

Particle board apparent consumption in *Europe* increased by 8.4% to 32.4 million m³ (graph 8.2.1, table 8.2.1). Production also increased by almost the same proportion, 8.5%, attaining the level of 34 million m³. In the major producer countries, Germany, France and Italy, production increased by 7.1%, 8.5% and 24.7%, respectively (graph 8.2.2, table 8.2.2). In Poland, where 90% of the production is used by the furniture industry, it expanded by 16.8%. In Turkey and Slovenia production went up by 44.8% and 42.7%, respectively, where the increase was absorbed by domestic markets.

European imports and exports followed the same trend, increasing by 8.0% and 7.3%. Most countries

expanded exports with the main exception of the United Kingdom where they fell by 22.4% due to a strong internal demand. Italy and Poland also show major import increases, 89.4% and 44%. The data also show that Europe as a whole is a net exporter of particle board in the order of 1.5 million m³. The main markets are the Far and Middle East.

Particle board production in the Russian Federation showed a slight increase of 0.7% to 1.5 million m³ in 1997, following steep fallbacks in the previous years. However, this was due to an expansion of exports while apparent consumption further dropped by 4.3%.

In 1997, in North America apparent consumption of particle board as a whole continued the steady increase since 1992 and reached 23.6 million m³, or 40.3% over the same period. This is mostly due to the expansion of the OSB industry.

Particle board production, excluding OSB, (table 8.2.3), increased in Canada and the United States by 11% and 1.4%, respectively. United States imports were up 8.4% from 1996 levels, they originate in the other North American Free Trade Agreement (NAFTA) countries, Canada and Mexico.

TABLE 8.1.1
Apparent consumption of wood-based panels (excluding veneer sheets) in Europe,
the Russian Federation and North America, 1993 to 1997

	Volume					Per cent of total	
	1993	1994	1995	1996	1997 ^a	1993	1997 ^a
	(million m ³)						
EUROPE							
Particle board	27.35	27.96	30.25	29.93	32.43	72.4	72.6
Plywood	5.97	6.18	6.41	5.90	6.05	15.8	13.5
Fibreboard	4.47	4.69	5.95	5.95	6.20	11.8	13.9
Total	37.79	38.83	42.61	41.78	44.68	100.0	100.0
Change on previous year							
- Volume		1.04	3.78	-0.83	2.90		
- Per cent		2.8	9.7	-1.9	6.9		
RUSSIAN FEDERATION							
Particle board	3.90	2.61	2.04	1.37	1.31	70.0	61.5
Plywood	0.59	0.33	0.27	0.37	0.36	10.6	16.9
Fibreboard	1.08	0.67	0.62	0.42	0.46	19.4	21.6
Total	5.57	3.61	2.93	2.16	2.13	100.0	100.0
Change on previous year							
- Volume		-1.96	-0.68	-0.77	-0.03		
- Per cent		-35.2	-18.8	-26.3	-1.4		
NORTH AMERICA							
Particle board	18.10	19.05	18.66	22.04	23.61	40.9	48.7
Plywood	18.86	19.19	18.90	18.89	17.74	42.6	36.6
Fibreboard	7.30	7.51	6.87	7.09	7.17	16.5	14.7
Total	44.26	45.75	44.43	48.02	48.52	100.0	100.0
Change on previous year							
- Volume		1.49	-1.32	3.59	0.50		
- Per cent		3.4	-2.9	8.1	1.0		

^a Preliminary.

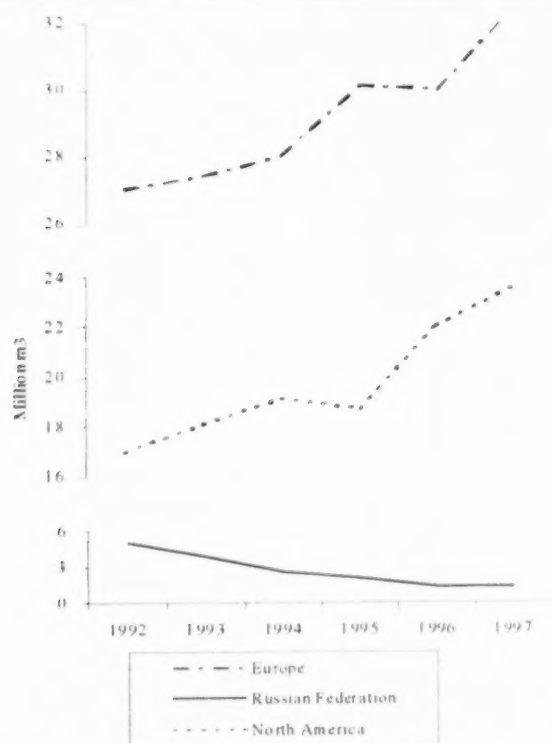
TABLE 8.2.1

Particle board (wood and non-wood) balance in Europe, the Russian Federation and North America, 1993 to 1997
(million m³)

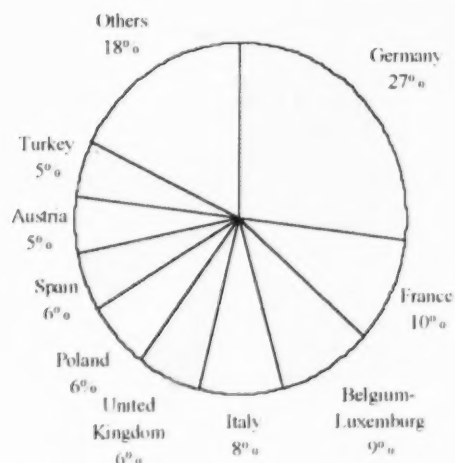
	1993	1994	1995	1996	1997 ^a	Timber Committee estimates ^b	
						for 1997	for 1998
EUROPE							
Production	27.35	28.87	30.88	31.34	34.00	31.93	32.44
Imports	6.21	6.69	7.20	6.99	7.50	6.73	6.55
Exports	6.21	7.60	7.83	8.40	9.07	8.54	8.64
Net trade ^c	-	0.91	0.63	1.41	1.57	1.81	2.09
Apparent consumption	27.35	27.96	30.25	29.93	32.43	30.12	30.35
RUSSIAN FEDERATION							
Production	3.94	2.63	2.21	1.47	1.48	1.41	1.51
Exports	0.04	0.02	0.17	0.10	0.17	0.11	0.12
Apparent consumption	3.90	2.61	2.04	1.37	1.31	1.30	1.39
NORTH AMERICA							
Production	18.52	19.16	19.74	22.74	24.22	24.74	25.82
Imports	3.05	3.79	3.72	4.66	5.67	5.33	5.73
Exports	3.47	3.90	4.80	5.36	6.28	6.13	6.60
Net trade ^c	0.42	0.11	1.08	0.70	0.61	0.80	0.87
Apparent consumption	18.10	19.05	18.66	22.04	23.61	23.94	24.95

^a Preliminary.^b From the Timber Committee's October 1997 session, adjusted for compatibility with historical (actual) data.^c Negative values are net imports.

GRAPH 8.2.1
Consumption of particle board, 1992 to 1997



GRAPH 8.2.2
Production of particle board, 1997 (Europe)



Source: UNECE TIMBER database

Source: UNECE TIMBER database

TABLE 8.2.2
Production and trade of particle board (including non-wood), 1994 to 1997

	1994	1995	1996	1997 ^a	Change 1996 to 1997	
					Volume	Per cent
	(1000 m ³)					
PRODUCTION						
EUROPE	28867	30880	31341	33999	2659	8.5
Germany	8639	8902	8584	9190	606	7.1
France	2567	2733	3030	3289	259	8.5
Belgium-Luxembourg	2400	2876	3087	3087	...	...
Italy	2202	2450	2205	2750	545	24.7
United Kingdom	1803	2118	2164	2175	11	0.5
Poland	1336	1466	1747	2041	294	16.8
Spain	1730	1863	1970	1970	...	...
Austria	1666	1700	1700	1771	71	4.2
Turkey	898	1243	1193	1728	535	44.8
Czech Republic	536	587	635	737	102	16.1
Portugal	757	650	695	695	...	...
Sweden	609	632	577	612	35	6.1
Finland	477	475	605	603	-2	-0.3
Switzerland	656	564	530	501	-29	-5.5
Other countries	2591	2621	2619	2851	232	8.8
RUSSIAN FEDERATION	2626	2206	1472	1483	11	0.7
Canada	4493	5309	6754	7954	1200	17.8
United States	14664	14429	15985	16263	278	1.7
NORTH AMERICA	19157	19738	22739	24217	1478	6.5
EXPORTS						
EUROPE	7604	7831	8401	9070	669	8.0
Belgium-Luxembourg	1872	1942	1930	2065	135	7.0
Germany	1320	1245	1296	1484	188	14.5
France	827	1000	1206	1252	46	3.8
Austria	909	1025	1134	1204	70	6.2
Switzerland	427	376	400	395	-5	-1.3
Czech Republic	220	230	312	381	69	22.1
Portugal	455	363	341	341	...	...
Spain	203	205	249	249	...	...
United Kingdom	190	254	255	198	-57	-22.4
Other countries	1182	1192	1278	1501	224	17.5
RUSSIAN FEDERATION	18	169	96	170	74	77.1
Canada	3447	4302	5198	6072	874	16.8
United States	457	496	158	205	47	29.7
NORTH AMERICA	3904	4798	5356	6277	921	17.2
IMPORTS						
EUROPE	6690	7201	6990	7498	508	7.3
Germany	1713	1755	1559	1546	-13	-0.8
United Kingdom	1167	1190	1185	1119	-66	-5.6
Netherlands	755	721	674	674	...	...
Italy	346	340	340	644	304	89.4
France	650	690	638	613	-24	-3.8
Poland	85	310	325	468	143	44.0
Spain	328	339	446	446	...	...
Denmark	316	306	290	290	...	...
Sweden	186	293	263	287	24	9.1
Other countries	1144	1257	1270	1410	141	11.1
Canada	231	230	301	261	-40	-13.3
United States	3557	3490	459	5410	1051	24.1
NORTH AMERICA	3788	3720	4660	5671	1011	21.7

^a Preliminary.

TABLE 8.2.3

Particle board balance (excluding OSB)
in Canada and the United States in 1996 and 1997
(1000 m³)

	1996	1997	Change in %
Canada			
- Production	2066	2294	11.0
- Imports	221	201	-9.1
- Exports	1069	1124	5.1
- Apparent consumption	1218	1371	12.6
United States			
- Production	7742	7852	1.4
- Imports	1183	1282	8.4
- Exports	158	205	29.7
- Apparent consumption	8767	8929	1.8

TABLE 8.3.1

OSB balance in Canada and the United States
in 1996 and 1997
(1000 m³)

	1996	1997	Change in %
Canada			
- Production	4688	5660	20.7
- Imports	80	60	-25.0
- Exports	4127	4948	19.9
- Apparent consumption	641	772	20.4
United States			
- Production	8243	8411	2.0
- Imports	3906	4666	19.5
- Exports	139	148	6.5
- Apparent consumption	12010	12929	7.7

8.3 Oriented strand board (OSB)¹

Production of OSB (excluding particle board) continued to increase in *North America* in 1997, by 20.7% in Canada and by 2% in the United States (table 8.3.1). Apparent consumption in the United States expanded by 7.7% due to increased imports from Canada. As OSB capacity expanded faster than demand, a steep fall in prices occurred in 1996 and continued until the first quarter of 1997 when the lowest level was recorded at \$120 according to Random Lengths (graph 8.3.1). Prices somewhat strengthened during the rest of 1997, but were falling again in 1998.

European OSB production is estimated to have reached some 800 thousand m³ in 1997, though the volumes may still appear modest, this represents a 60% increase from 1996. As the newly installed mills in Ireland, Luxembourg and Poland reach optimum capacity utilization, production is expected to continue to expand.

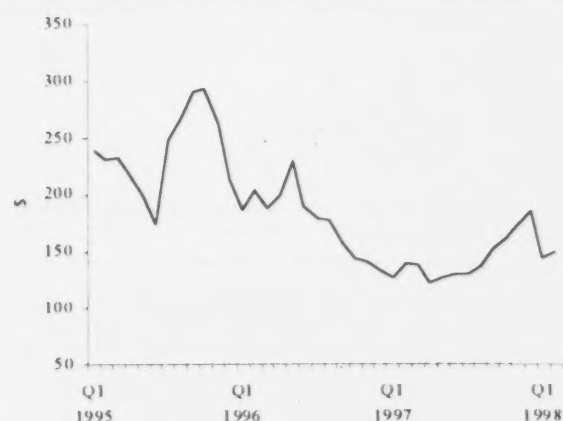
8.4 Plywood

Apparent consumption of plywood in *Europe* increased slightly in 1997 by 2.5% to 6.05 million m³ (graph 8.4.1, table 8.4.1). Production rose by 2.2% to 3.8 million m³. The main producer, Finland increased output by 118 thousand m³ to 987 thousand m³.

¹ According to the FAO classification OSB is included in particle board. However because of the importance of the product and because separate data are available for OSB, this product is examined separately.

GRAPH 8.3.1

Oriented strand board* prices, 1995 to 1998



*Prices FOB mill for 7/16-inch thick, 1000 square feet, from North Central United States.

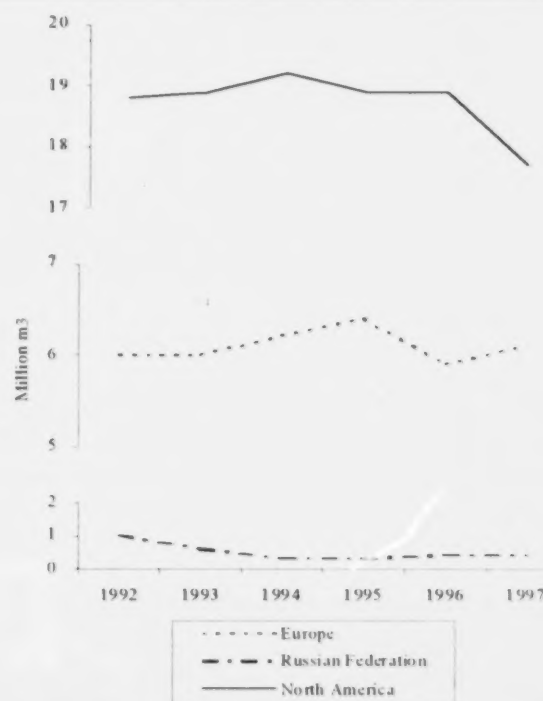
Source: Random Lengths, 1998.

Germany was the only country to show a major fallback, of 23.4% (table 8.4.2). Exports rose faster than production, by 7.8% to 2.2 million m³. Of the European total exports, 38.5% were by Finland, 80% of this goes to European Union markets. European plywood imports progressed by 5.3% in 1997 to 4.5 million m³. The only major importer to show a fallback in imports was the United Kingdom. Imports dropped to 947 thousand m³ or -16.3%, thus continuing a steady downward trend. In the period between 1990 and 1997 United Kingdom plywood imports fell by about 0.5 million m³.

In the *Russian Federation* production and exports of plywood in 1997 remained unchanged from 1996. Production amounted to 968 thousand m³, of which 615 thousand m³ were exported.

In *North America* apparent consumption fell by 6.1% in 1997 as a result of major production decreases in the United States, while in Canada there was practically no change from 1996. Production of plywood in the United States amounted to 16 million m³ or almost 1 million m³ less than in 1996. This is the result of diminishing resources and capacity in the West and continued developments in the structural panel sector, where the rapid growth of OSB production and capacity, faster than demand, has constrained plywood prices at a low level (graph 8.4.2). However, United States plywood exports, increased by 17.3% to 1.6 million m³, mainly to Europe. The major export markets for the United States in Europe were the United Kingdom, Germany, the Netherlands, Ireland, Belgium, Denmark and Italy.

GRAPH 8.4.1
Consumption of plywood, 1992 to 1997



Source: UN/ECE TIMBER database

TABLE 8.4.1
Plywood balance in Europe, the Russian Federation and North America, 1993 to 1997
(million m³)

	1993	1994	1995	1996	1997 ^a	Timber Committee estimates ^b	
						for 1997	for 1998
EUROPE							
Production	3.30	3.67	3.64	3.67	3.75	3.80	3.87
Imports	4.33	4.42	4.56	4.31	4.54	3.84	3.95
Exports	1.66	1.91	1.79	2.08	2.24	2.15	2.15
Net trade ^c	-2.67	-2.51	-2.77	-2.23	-2.30	-1.69	-1.80
Apparent consumption	5.97	6.18	6.41	5.90	6.05	5.49	5.67
RUSSIAN FEDERATION							
Production	1.04	0.89	0.94	0.97	0.97	0.97	0.99
Imports	0.01	0.01	-	0.01	0.01	0.01	0.01
Exports	0.46	0.57	0.67	0.61	0.62	0.63	0.65
Net trade ^c	0.45	0.56	0.67	0.60	0.61	0.62	0.64
Apparent consumption	0.59	0.33	0.27	0.37	0.36	0.35	0.35
NORTH AMERICA							
Production	18.92	19.21	18.97	18.79	17.82	17.88	17.35
Imports	1.92	1.84	2.14	2.35	2.40	2.56	2.66
Exports	1.98	1.86	2.21	2.25	2.48	2.43	2.66
Net trade ^c	0.06	0.02	0.07	-0.10	0.08	-0.14	0.00
Apparent consumption	18.86	19.19	18.90	18.89	17.74	18.01	17.35

^a Preliminary.

^b From the Timber Committee's October 1997 session, adjusted for compatibility with historical (actual) data.

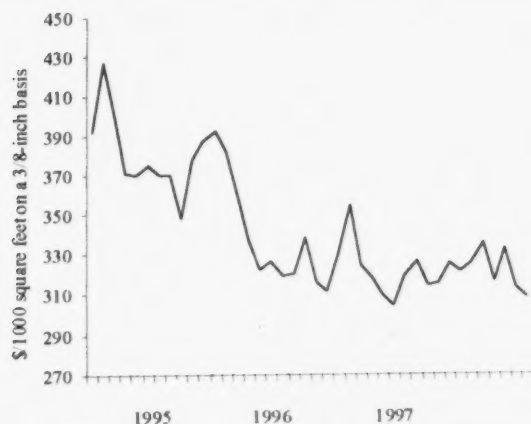
^c Negative values are net imports.

TABLE 8.4.2
Production and trade of plywood, 1994 to 1997

	1994	1995	1996	1997 <i>a</i>	Change 1996 to 1997	
					Volume	Per cent
	(1000 m ³)					
PRODUCTION						
EUROPE	3672	3635	3672	3751	80	2.2
of which :						
Finland	700	778	869	987	118	13.6
France	594	559	537	576	39	7.3
Italy	427	418	402	414	12	3.0
Germany	397	498	512	392	-120	-23.4
Spain	210	210	210	210	...	...
Austria	150	150	150	150	...	...
Poland	124	115	109	118	9	8.3
Sweden	85	108	119	113	-6	-5.0
Czech Republic	76	77	100	110	10	10.0
Israel	109	109	109	109	0	0.0
Other countries	800	613	555	572	18	3.2
Russian Federation	890	939	972	968	-4	-0.4
Canada	1834	1831	1814	1828	14	0.8
United States	17380	17140	16975	15987	-988	-5.8
North America	19214	18971	18789	17815	-974	-5.2
EXPORTS						
EUROPE	1915	1792	2077	2239	163	7.8
of which :						
Finland	627	668	794	861	67	8.4
France	193	183	214	223	10	4.5
Austria	158	130	150	166	16	10.7
Germany	131	149	135	135	...	...
Italy	108	96	117	125	8	6.8
Other countries	698	566	667	729	62	9.3
Russian Federation	568	670	612	615	3	0.5
Canada	511	818	870	859	-11	-1.3
United States	1346	1395	1384	1624	240	17.8
North America	1857	2213	2254	2483	229	10.2
IMPORTS						
EUROPE	4424	4556	4315	4544	230	5.3
of which :						
Germany	1003	1177	975	1083	108	11.1
United Kingdom	1202	1127	1132	947	-185	-16.3
Netherlands	560	552	522	522	...	...
Belgium-Luxembourg	267	146	215	313	98	45.6
Italy	257	323	295	312	17	5.8
France	234	260	256	310	54	21.1
Other countries	901	971	920	1057	138	15.0
Canada	288	353	424	428	4	0.9
United States	1547	1791	1930	1973	43	2.2
North America	1835	2144	2354	2401	47	2.0
Japan	4045	4394	5314	5326	12	0.2

^a Preliminary

GRAPH 8.4.2
North American structural panel composite price,
1994 to 1998



Source: Random Lengths Export, 1998.

8.5 Hardwood plywood

During 1997 developments in the tropical hardwood plywood sector have been dominated by the Asian crisis. At the beginning of the year sustained demand from Japan, China, Republic of Korea and other southeast Asian countries had stabilized prices following the trend of 1996 at \$450 to \$500 per m³ of Indonesian and Malaysian thin plywood. The weakening of Japanese and Korean currencies together with the rise of the consumption tax in Japan lowered plywood imports for 1997. The result was a rapid fall in plywood prices which was later amplified by the financial crisis in other southeast Asian countries which saw their currencies steadily devalue against the dollar. Plywood prices had fallen in May 1998 to half of the average level in 1997 as demand continues depressed in Japan and Korea, and China has also considerably reduced its imports due to a slowdown of its construction sector and a higher plywood domestic production. Southeast Asian exports did not expand further in North American and European markets. The result for the plywood industry in Indonesia and Malaysia has been an important rise in costs of imported inputs such as glue and also the substantial rise of short-term money lending which has soared.

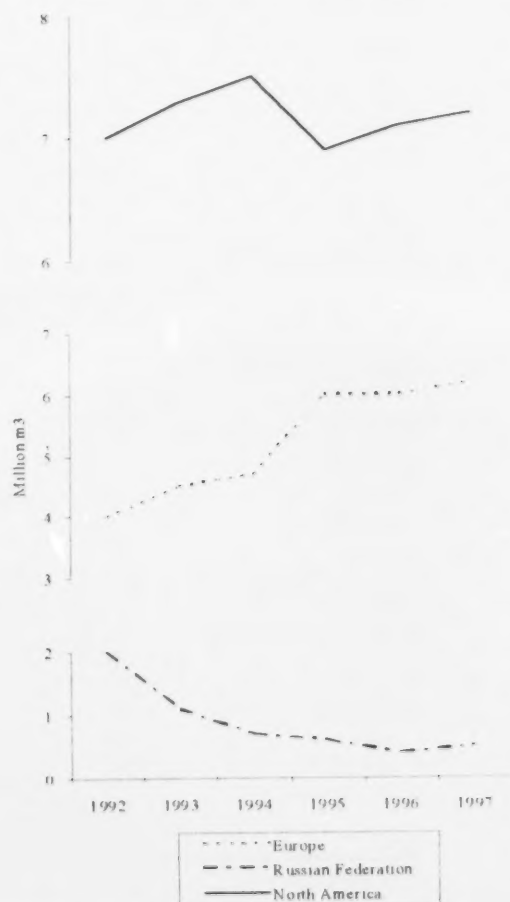
Other effects of the crisis are the closure of mills and the resulting unemployment, the extent of which is yet too early to evaluate. The dismantling of the Indonesian plywood producers association, APKINDO, which is part of the negotiations with the IMF, now allows individual exporters to directly negotiate prices exported plywood, has further pulled

down prices. The Japanese plywood industries find it very difficult to compete with these cheap imports, and mill closures are feared. Important fallback in Indonesian and Malaysian exports are expected in 1998. (Note: further discussion of tropical plywood markets is found in Chapters 4 and 7.)

8.6 Fibreboard

In 1997 apparent consumption of fibreboard as a whole increased in Europe by 4.2% to 6.2 million m³ (graph 8.6.1, tables 8.6.1 and 8.6.2). At the time of writing the secretariat had not received data from several major producing countries notably Germany. According to the European Federation of Fibreboard Industries (FEROPA) and the Euro MDF Board (EMB) the increase in apparent consumption may have been in the order of 20%, mostly due to the continued expansion of MDF. According to FEROPA, both hardboard and insulating board production in Europe

GRAPH 8.6.1
Consumption of fibreboard, 1992 to 1997



Source: UNECE TIMBER database.

rose in 1997 by 1.7% and 6% respectively.

Production of fibreboard (including MDF) in *North America* in 1997 showed no change from 1996, remaining at 7.3 million m³. Production increases of MDF in both Canada and the United States were offset by equivalent drops of hardboard and insulating board.

In the *Russian Federation* apparent consumption of fibreboard rose to 460 thousand m³ or a 9.5% increase. Production increased in the same proportion, and exports maintained their 1996 levels.

8.7 Medium density fibreboard

Recorded production of MDF in *Europe*, including Germany, rose by 20.7% to 5.4 million m³, according to EMB, as newly installed mills attained

working capacity. Capacity utilization for the industry was 83.8%. Apparent consumption was 5.2 million m³ or 0.94 million m³ higher than in 1996, thus confirming the high market penetration potential of MDF in a favourable economic context. MDF exports to the Far East declined as a consequence of the Asian crisis, this was partially compensated by the emerging economies of eastern Europe which absorbed higher volumes.

In *North America* MDF production and consumption continued its upward trend in 1997. Production in the United States rose by 16.8% attaining 2.4 million m³. In Canada combined production of MDF and hardboard rose by 34.5% to 0.6 million m³ and MDF exports, mostly to the United States doubled at 0.3 million m³.

TABLE 8.6.1
Fibreboard balance in Europe, the Russian Federation and North America, 1993 to 1997
(million m³)

	1993	1994	1995	1996	1997 <i>a</i>	Timber Committee estimates <i>b</i>	
						for 1997	for 1998
EUROPE							
Production	4.55	4.94	6.02	6.10	6.45	6.24	6.36
Imports	2.09	2.48	2.78	3.14	3.76	3.14	3.14
Exports	2.17	2.73	2.85	3.29	4.01	3.50	3.60
Net trade <i>c</i>	0.08	0.25	0.07	0.15	0.25	0.36	0.46
Apparent consumption	4.47	4.69	5.95	5.95	6.20	5.88	5.90
RUSSIAN FEDERATION							
Production	1.16	0.77	0.75	0.59	0.63	0.60	0.62
Exports	0.08	0.10	0.13	0.17	0.17	0.18	0.18
Apparent consumption	1.08	0.67	0.62	0.42	0.46	0.42	0.44
NORTH AMERICA							
Production	7.63	7.87	7.23	7.31	7.32	7.83	7.94
Imports	0.55	0.70	0.73	0.94	1.27	1.09	1.15
Exports	0.88	1.06	1.09	1.16	1.42	1.43	1.41
Net trade <i>c</i>	0.33	0.36	0.36	0.22	0.15	0.34	0.26
Apparent consumption	7.30	7.51	6.87	7.09	7.17	7.49	7.68

^a Preliminary.

^b From the Timber Committee's October 1997 session, adjusted for compatibility with historical (actual) data

^c Negative values are net imports.

TABLE 8.6.2
Production and trade of fibreboard, 1994 to 1997

	1994	1995	1996	1997 ^a	Change 1996 to 1997	
					Volume	Per cent
(1000 m ³)						
PRODUCTION						
EUROPE :						
Hardboard ^b	4209	5239	5338	5783	445	8.3
Insulating board	728	776	760	665	-95	-12.5
Total	4937	6015	6098	6448	349	5.7
of which :						
Germany	854	854	854	854	...	...
Poland	515	650	653	719	66	10.1
Italy	222	915	800	700	-100	-12.5
Spain	550	600	590	590	...	...
Turkey	120	131	301	574	273	90.7
France	483	477	483	555	72	14.9
United Kingdom	400	408	420	460	40	9.5
Portugal	336	387	387	387	...	...
Ireland	180	246	274	330	56	20.4
Other countries	1277	1347	1336	1279	-58	-4.3
Russian Federation	767	748	589	631	42	7.1
Canada	827	717	894	1056	162	18.1
United States	7044	6508	6415	6262	-153	-2.4
North America	7871	7225	7309	7318	9	0.1
EXPORTS						
EUROPE						
of which :	2731	2853	3286	4011	725	22.1
Germany	325	320	522	718	196	37.5
Italy	427	400	411	574	163	39.7
France	311	320	338	370	32	9.5
Portugal	277	250	341	341	...	...
Poland	196	298	293	337	44	15.0
Belgium-Luxembourg	80	80	76	308	232	307.4
Other countries	1114	1185	1305	1363	58	4.5
Russian Federation	98	134	173	170	-3	-1.7
Canada	360	365	497	744	247	49.7
United States	700	727	664	675	11	1.7
North America	1060	1092	1161	1419	258	22.2
IMPORTS						
EUROPE						
of which	2476	2778	3143	3758	615	19.6
United Kingdom	376	490	599	755	156	26.0
Germany	408	441	497	543	46	9.3
Spain	125	132	207	341	135	65.3
Netherlands	249	287	304	304	...	...
Italy	229	313	260	298	38	14.6
Belgium-Luxembourg	201	191	197	205	9	4.3
Other countries	888	925	1080	1312	232	21.5
Canada	164	154	164	157	-7	-4.3
United States	531	580	773	1109	336	43.5
North America	695	734	937	1266	329	35.1

^a Preliminary.

^b Including medium density fibreboard.

CHAPTER 9

WOODPULP, PULPWOOD AND PAPER AND PAPERBOARD SUPPLY, TRADE AND CONSUMPTION

Highlights

- Consumption and production of paper and paperboard grew strongly in 1997 and early 1998, except for Japan.
- Pulp production also rose in 1997, but the market was weakened by rising stocks. Market pulp prices rose moderately.
- Record volumes of pulpwood were consumed in 1997 in Europe and North America.
- Removals of pulpwood rose moderately, while imports increased rather faster. The trade between the Baltic and Nordic countries represents the largest single flow in Europe.
- In 1997, pulpwood prices ceased to fall everywhere. They rose steadily in 1997 and 1998 in several countries, but not in all.

This section analyses trends on markets for pulpwood, preceded by a brief discussion of developments for pulp and paper. It should be borne in mind that in the standard ECE/FAO terminology "pulpwood" refers to all wood used as raw material for the manufacture of pulp, particle board and fibreboard. "Pulpwood" includes "pulpwood, round and split" (or "round pulpwood"), which may be either softwood or hardwood and "residues, chips and particles," a by-product of the sawmilling and plywood industries.

9.1 Paper and paperboard

In 1997, apparent consumption of paper and paperboard rose in all three regions, by 3.1% in Europe, 4.9% in North America and 8.6% in Russia. The latter increase is the first to be recorded since 1992¹, although the 1997 figure is still less than half that of 1992. The 1997 consumption figure for Europe is the highest ever, but that for North America is lower than for 1995².

However there are marked differences between paper assortments. Some, including newsprint and

household and sanitary paper show the characteristics of mature products, with little or no long term growth trend (even a slight downward trend for newsprint in North America), and a strong influence of cyclical factors. Strong growth is recorded however for "other printing and writing papers" which includes the sheets used in millions of photocopiers and computer printers, as well as the paper for many magazines and for direct mail catalogues. Production of this type of paper rose in 1997 by 10.4% in Europe, 7.5% in North America and 1.6% in Russia. The production increase for Finland, Europe's largest manufacturer of these grades, was nearly 22%.

This strong growth in production of paper and paperboard in 1997 continued in Europe in the first half of 1998, still under the influence of good economic conditions. In other regions, however growth in production was marginal or negative. The data for the first quarter of 1998, published by the European industry association, CEPI, quoting the associations for Canada, Japan and the United States are as follows:

¹ 1992 is the first year for which separate data are available for the Russian Federation.

² The figure for North American apparent consumption might be artificially high because of stock changes.

TABLE 9.1.1

Production of paper and paperboard in Europe, the Russian Federation and North America, 1994 to 1997

	1994	1995	1996	1997 ^a	Change 1996 to 1997	
					Volume	Per cent
(1000 m.t.)						
NEWSPRINT						
EUROPE	9740	10203	9617	9985	368	3.8
of which :						
Sweden	2415	2346	2283	2411	128	5.6
Germany	1499	1726	1572	1618	46	2.9
Finland	1446	1425	1327	1470	143	10.8
United Kingdom	769	873	976	1030	55	5.6
Norway	1007	973	913	798	-115	-12.6
France	844	890	783	783	...	...
Other countries	1760	1969	1763	1874	111	6.3
Russian Federation	1038	1457	1245	1198	-47	-3.8
Canada	9321	9226	9025	9205	180	2.0
United States	6335	6351	6303	6544	241	3.8
North America	15656	15577	15328	15749	421	2.7
OTHER PRINTING AND WRITING PAPER						
EUROPE	28539	28830	28695	31689	2993	10.4
of which :						
Finland	6159	6457	6014	7317	1303	21.7
Germany	5865	5872	5702	6390	688	12.1
France	3268	3096	3141	3141	...	...
Italy	2595	2594	2662	2930	268	10.1
Sweden	2061	2047	2170	2459	289	13.3
Austria	1728	1764	1787	1826	39	2.2
Other countries	6863	7000	7219	7626	406	5.6
Russian Federation	430	486	433	440	7	1.6
Canada	4445	4882	4689	4966	277	5.9
United States	23323	23042	22553	24328	1775	7.9
North America	27768	27924	27242	29294	2052	7.5
OTHER PAPER AND PAPERBOARD						
EUROPE	39668	40220	40382	42221	1839	4.6
of which :						
Germany	7093	7229	7459	7945	486	6.5
Sweden	4808	4766	4565	4909	344	7.5
France	4589	4633	4632	4632	...	...
Italy	3956	4033	4114	4423	309	7.5
United Kingdom	3241	3454	3460	3646	186	5.4
Finland	3304	3060	3100	3361	261	8.4
Other countries	12677	13045	13052	13305	253	1.9
Russian Federation	1944	2130	1546	1694	148	9.6
Canada	4583	4605	3758	3805	47	1.3
United States	51290	56133	53115	55402	2287	4.3
North America	55873	60738	56873	59207	2334	4.1

^a Preliminary.

TABLE 9.1.2
Percentage of change in production between first quarter 1997 and first quarter 1998

West Europe:	+ 7.4% (+ 10.0% for graphic grades, less for others)
United States:	+ 1.1 (-0.9% for graphic grades, with a marked drop for uncoated wood free, and -4.8% for wrappings)
Canada:	-0.8% (+ 10.1% for graphic grades, but -6.6% for newsprint, with drops for wrappings)
Japan:	- 0.2% (declines for uncoated mechanical, wrappings and boards, partly counterbalanced by other graphic grades, especially coated papers).

Source: CEPI, 1998.

9.2 Woodpulp

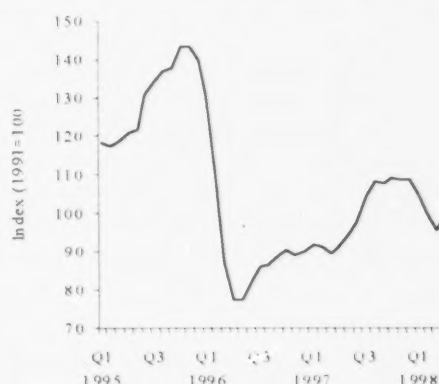
Perhaps the single most important general influence on the economic viability of millions of forest holdings, private and public, is the international price for market pulp, which constrains to a very large degree the ability of pulp mills to pay for the raw material they purchase (roundwood or residues), and has indirect effects throughout the sector, notably on the profitability of sawmills, and the level of removals. It influences and is influenced by the price of recovered paper. The international market pulp price is determined by a delicate balance between real demand from pulp users (i.e. paper producers, themselves facing international competition for their products), production capacity for market pulp, stock levels and the perceptions of the main "players" as regards likely future developments. Events in recent years have shown that quite small changes in this balance can have marked effects on the price of pulp.

In early 1996, the reference price for NBSK (Northern Bleached Softwood Kraft pulp, the benchmark grade) was at its lowest point, around \$400/ton³, down from \$1000/ton in mid 1995. In 1996, 1997 and 1998, developments were not so dramatic as in the first months of 1996: the pulp price rose slightly, with fluctuations, to a list price of about \$600 in June 1998, although there are indications that many transactions are taking place at below this level. There was effective demand for pulp in 1997, fuelled by the rises in paper production mentioned above, but these were counterbalanced by the appearance of new capacity on pulp markets. When stocks rose, as they did towards the end of 1997, producers cut back on production rates to avoid an excessive build up of stocks. NORSCAN⁴ stocks were nearly 2 million tons in early 1998 (still well below the 2.5 million of early

1996), but had been reduced to 1.5 million tons by early summer. Nevertheless, some analysts expressed concern that the pulp price rise in spring 1998 would be short-lived (graphs 9.2.1 and 9.2.2).

GRAPH 9.2.1

Germany: import price index for chemical pulp, 1995 to 1998



Source: ZMP, official statistics, 1998.

Additional features of the pulp markets in 1997 and 1998 were the continuing increase in the relative importance of hardwood pulp (eucalyptus and birch), which now account for just under 55% of shipments of paper grade pulp to western Europe, the pivotal pulp market, influencing developments elsewhere. Likewise, the share of non-NORSCAN producers (e.g. Brazil, Chile, Asia) has risen strongly: in 1987 they accounted for just over 25% of shipments to western Europe, now they account for nearly 40%.

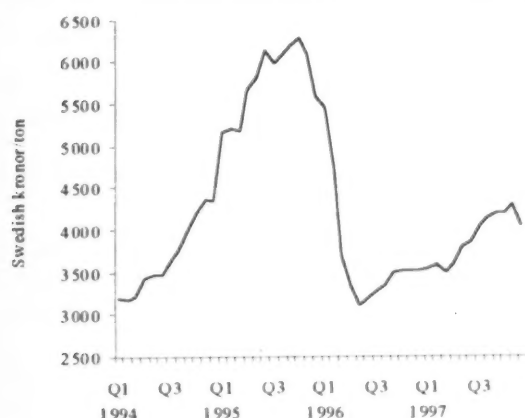
The rise in the dollar exchange rate has meant that the apparent slow growth in pulp prices has been more marked for many importers in terms of their own currencies (e.g. for Germany, as shown by the graph). The effects have been more dramatic for Japanese and other Asian importers.

³ The US dollar is the reference currency in world pulp markets, a factor which must be taken into account in analysis, as changes in the dollar exchange rate will alter costs and income for both buyers and sellers.

⁴ NORTH American and SCANDinavian.

GRAPH 9.2.2

Sweden: export price for chemical pulp
(bleached sulphate), 1994 to 1997



Source: "Forest Products Prices, 1995-1997," *Timber Bulletin*, UN-ECE/FAO, 1998.

In volume terms, pulp production rose moderately in North America and Russia, as well as in most European countries (table 9.2.2). In Finland, however, production levels increased much faster, by 1.4 million m.t. (over 14%). This represented a "correction" of the falls in 1995 and 1996, which affected Finland more severely than its main rival, Sweden.

Although statistics are not yet available on recovered paper availability and use, it is clear that new recovered paper capacity is being installed, mostly near major urban markets, and that this material continues to grow in absolute and relative importance.

The changes in the relative importance of virgin pulp and of recovered paper in the fibre furnish can be roughly estimated by comparing year-on-year changes in production of paper and paperboard with those of consumption of virgin fibre. Assuming a constant percentage of coatings, fillers and processing losses, the difference between the changes in paper production and in virgin fibre consumption gives an idea of the change in consumption of recovered paper (table 9.2.1)

This would seem to indicate that consumption of recovered paper grew slightly more than the volume of virgin fibre in Europe and North America in 1997. As virgin fibre is still the largest part of the fibre furnish, this indicates a relatively greater increase for recovered fibre. In 1996, in Europe, recovered fibre consumption seems to have risen while that of virgin fibre fell, although in North America both seem to have fallen, with a steeper drop for recovered fibre.

TABLE 9.2.1

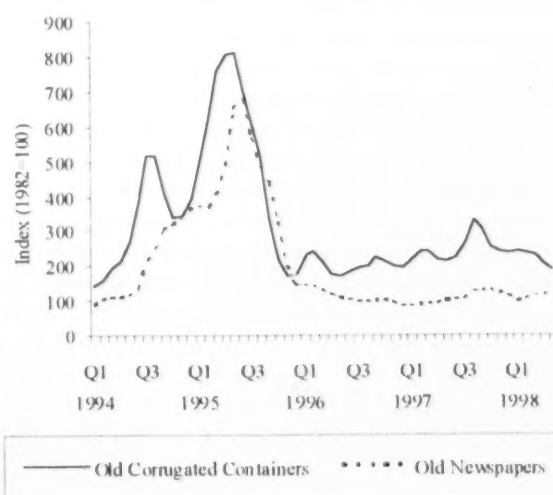
Estimated change in consumption of recovered paper,
1995 to 1997

	Europe		North America	
	1995/96	1996/97	1995/96	1996/97
<i>(Million m.t.)</i>				
Production of paper and board	-0.56	+5.20	-4.80	+4.80
Consumption of virgin fibre	-1.45	+2.70	-1.62	+1.85
Difference	+0.89	+2.50	-3.18	+2.95

Recovered paper markets are characterised by rather price-insensitive supply: recovery circuits, whether commercial, municipal or voluntary (or a combination of these three types) will tend to produce the same volumes of waste paper whatever the demand conditions. In some cases, recovered paper prices have been negative⁵ for months at a time, a phenomenon which could not occur in "normal" markets. In the United States at least, despite the higher levels of paper production, recovered paper prices remained stable throughout 1996, 1997 and early 1998, at levels not very much higher than in 1982 (graph 9.2.3).

GRAPH 9.2.3

United States waste paper prices, 1994 to 1998



Source: Bureau of Labour Statistics, United States, 1998.

⁵ i.e. suppliers have to pay collectors to remove the material.

TABLE 9.2.2

Production of woodpulp in Europe, the Russian Federation and North America, 1994 to 1997

	1994	1995	1996	1997 ^a	Change 1996 to 1997	
					Volume	Per cent
	(1000 m.t.)					
MECHANICAL WOODPULP						
EUROPE	12291	12904	11809	12627	818	6.9
of which :						
Finland	3631	3797	3489	3940	451	12.9
Sweden	2858	2861	2753	2959	206	7.5
Norway	1516	1627	1502	1534	32	2.1
Germany	1236	1266	1133	1220	87	7.7
France	886	934	757	757	...	...
United Kingdom	502	548	490	537	47	9.7
Other countries	1662	1871	1685	1680	-5	-0.3
Russian Federation	919	1245	976	1025	49	5.0
Canada	10838	11550	10973	11354	381	3.5
United States	5884	6167	5918	5950	32	0.5
North America	16722	17717	16891	17304	413	2.4
CHEMICAL WOODPULP ^b						
EUROPE	23749	24178	23582	25429	1847	7.8
of which :						
Sweden	7310	7326	7094	7535	441	6.2
Finland	6331	6291	6204	7149	945	15.2
France	1901	1884	1758	1758	...	...
Portugal	1539	1617	1594	1594	...	...
Spain	1374	1481	1481	1481	...	...
Austria	1196	1229	1206	1252	46	3.8
Norway	771	930	839	900	61	7.3
Poland	644	767	776	782	6	0.8
Germany	721	718	719	763	44	6.1
Czech Republic	448	440	411	453	42	10.3
Slovakia	323	249	241	386	145	60.2
Other countries	1192	1246	1259	1376	117	9.3
Russian Federation	2998	3828	2841	2890	49	1.7
Canada	13893	14093	13620	13720	100	0.7
United States	59904	60927	59506	60740	1234	2.1
North America	73797	75020	73126	74460	1334	1.8

^a Preliminary.^b Including semi-chemical woodpulp and dissolving grades.

9.3 Pulpwood

Due to the recovery in production of pulp, as well as the high levels of production of particle board, MDF and other panels, record volumes of pulpwood were consumed⁶ in 1997 in Europe and North America. European pulpwood consumption was 15 million m³ (7.7%) higher in 1997 than in 1996 and in North America 9.2 million m³ (2.1%) higher (table 9.3.1). Over a third of the increase in Europe occurred in Finland, where "derived requirements" rose by 5.5 million m³ (14%) in 1997 (table 9.3.2).

Against this background of high levels of pulpwood consumption, but fairly weak price conditions for the products of pulpwood, it is interesting to compare developments for the different types of pulpwood supply in 1997, as regards volume and price.

Pulpwood removals rose in almost all countries, with the significant exception of Russia (table 9.3.3).

TABLE 9.3.1
Derived pulpwood requirements in Europe and North America, 1994 to 1997

	1994	1995	1996	1997 ^a
	(million m ³ equivalent) ^b			
EUROPE				
Mechanical woodpulp	30.73	32.26	29.52	31.57
Semi-chemical woodpulp	3.92	4.33	4.17	4.56
Chemical woodpulp ^c	107.73	109.13	106.52	114.77
Particle board	40.41	43.23	43.88	47.60
Fibreboard	8.89	10.83	10.98	11.61
Total	191.67	199.77	195.06	210.10
Change on previous year				
- Volume		8.10	-4.71	15.04
- Per cent		4.2	-2.4	7.7
NORTH AMERICA				
Mechanical woodpulp	41.81	44.29	42.23	43.26
Semi-chemical woodpulp	13.42	13.01	12.71	13.34
Chemical woodpulp ^c	332.76	339.29	330.67	336.06
Particle board	26.82	27.63	31.83	33.90
Fibreboard	14.17	13.01	13.16	13.17
Total	428.97	437.22	430.60	439.74
Change on previous year				
- Volume		8.25	-6.62	9.14
- Per cent		1.9	-1.5	2.1

^a Preliminary.

^b Equivalent volume of wood in the rough, calculated from data on production of pulp and panels, using the following conversion factors:

Mechanical woodpulp:	1 m.t. = 2.5 m ³ equivalent.
Semi-chemical woodpulp:	1 m.t. = 3.0 m ³ equivalent.
Chemical woodpulp (including dissolving)	1 m.t. = 4.8 m ³ equivalent.
Particle board:	1 m ³ = 1.4 m ³ equivalent.
Fibreboard:	1 m ³ = 1.8 m ³ equivalent.

^c including dissolving pulp.

⁶ As it is not practicable to measure directly pulpwood consumption, this refers in fact to "derived pulpwood requirements", estimated on the basis of production of pulp, particle board and fibreboard, using the conversion factors listed in the note to the table.

TABLE 9.3.2
Derived pulpwood requirements in selected countries, 1994 to 1997

	1994	1995	1996	1997 ^a	Change 1996 to 1997	
					Volume	Per cent
	<i>(million m³ equivalent) ^b</i>					
Sweden	42.86	43.15	41.71	44.29	2.58	6.2
Finland	39.47	39.65	38.72	44.27	5.55	14.3
Germany	20.18	20.61	19.84	21.12	1.28	6.4
France	15.59	15.87	15.26	15.75	0.49	3.2
Spain	10.03	10.96	11.09	11.09		
Austria	9.28	9.47	9.24	9.65	0.41	4.4
Portugal	9.05	9.37	9.32	9.32		
Norway	8.20	9.20	8.45	8.70	0.25	2.9
Poland	5.89	7.01	7.37	7.92	0.56	7.5
Italy	4.77	6.29	5.62	6.25	0.63	11.3
Canada	100.89	104.60	103.19	106.55	3.36	3.3
United States	328.08	332.62	327.41	333.19	5.78	1.8

^a Preliminary.

^b Equivalent volume of wood in the rough calculated from data on production of pulp and paper using the conversion factors given in the footnote to previous table.

TABLE 9.3.3
Removals of pulpwood, 1994 to 1997

	1994	1995	1996	1997	Change 1996 to 1997	
					Volume	Per cent
	<i>(million m³)</i>					
EUROPE	109.9	116.1	106.6	108.9	2.3	2.2
Finland	21.2	23.0	21.0	22.3	1.3	6.4
Sweden	22.7	24.6	21.4	21.8	0.4	1.9
Germany	11.7	11.7	10.2			
France	11.0	11.4	9.7			
RUSSIAN FEDERATION	17.4	23.3	18.8	16.2	-2.5	-13.4
NORTH AMERICA	182.8	181.1	180.4	184.3	4.0	2.2
United States	150.7	150.0	149.3	153.2	4.0	2.7

However, it is noticeable that the increase in removals is considerably less, in both volume and percentage terms than the increase in pulpwood requirements, an indication that other sources of pulpwood (e.g. chips and residues or imports) are increasing their share of pulpwood consumption⁷ and/or that stocks had been built up and were being

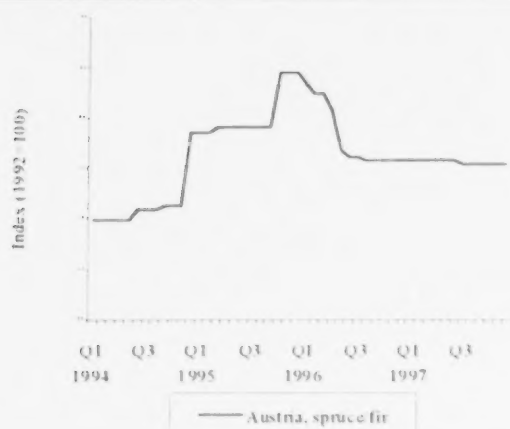
drawn down. In 1996, prices for round pulpwood in Europe fell steeply in almost all countries for which data are collected by the secretariat (graphs 9.3.1 to 9.3.5). However by the end of that year, they had stabilised everywhere. Thereafter, they rose in Finland (spruce and birch) and in Germany (all *industrieholz*⁸), but stayed at the same level in Austria (spruce/fir) and Sweden (pine, spruce and birch). In

⁷ The argument in this section is based on statistics from different sources, so any conclusions can only be considered as indicative and valid at the European, rather than the national level.

⁸ This assortment consists mostly of round pulpwood, but also includes some other grades, such as posts and pilings.

GRAPH 9.3.1

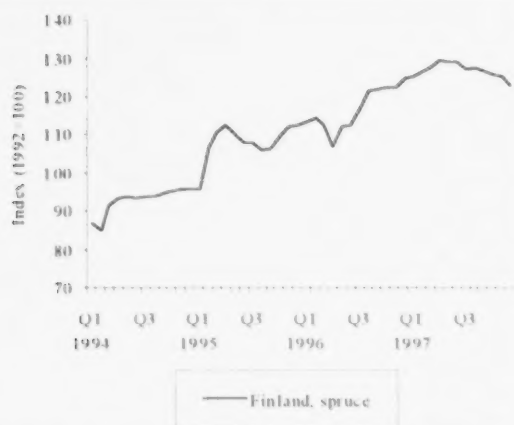
Pulpwood prices in Austria, 1994 to 1997



Source: "Forest Products Prices, 1995-1997," *Timber Bulletin*, UN-ECE/FAO, 1998.

GRAPH 9.3.2

Pulpwood prices in Finland, 1994 to 1997



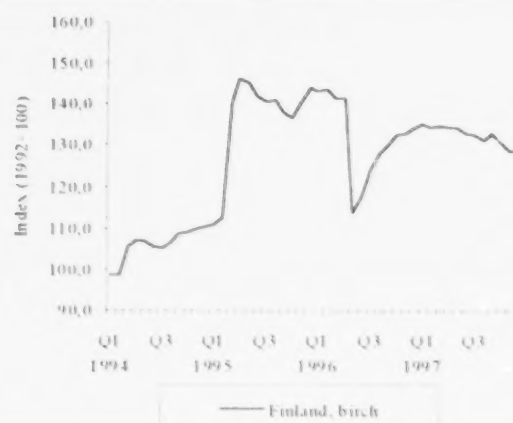
Source: "Forest Products Prices, 1995-1997," *Timber Bulletin*, UN-ECE/FAO, 1998.

early 1998 in Finland price negotiations between forest owners and industry were deadlocked for some time but on 30 June it was announced that an agreement between UPM-Kymmene and the forest owners foresaw an increase in the stumpage price for pulpwood of 5%. This agreement is valid to February 1999 and is expected to set the tone for all similar agreements in Finland in 1998.

Another main component of pulpwood supply is the *residues and chips* from the manufacture of sawnwood and panels. In 1997, sawn softwood production grew by nearly 5 million m³ (sawn hardwood production rose by 0.1 million m³). Thus there were at least 3-4 million m³ more sawmill

GRAPH 9.3.3

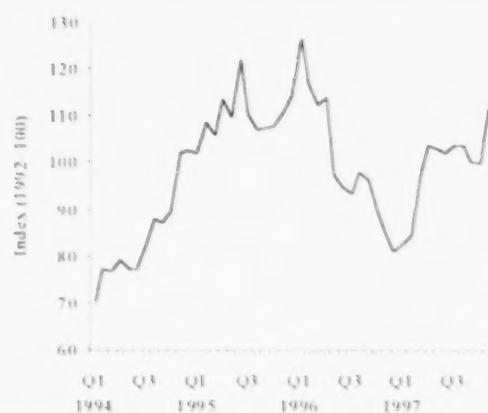
Pulpwood prices in Finland, 1994 to 1997



Source: "Forest Products Prices, 1995-1997," *Timber Bulletin*, UN-ECE/FAO, 1998.

GRAPH 9.3.4

Pulpwood prices in Germany, 1994 to 1997



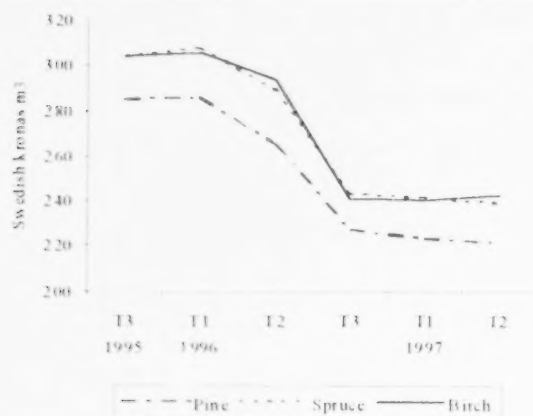
Source: "Forest Products Prices, 1995-1997," *Timber Bulletin*, UN-ECE/FAO, 1998.

residues potentially available as raw material for the pulp and panel industries than in 1996. Given that the sources of this material are relatively concentrated and that the price is often competitive, it is likely that the supply of residues to the pulpwood using industries increased by several million m³.

Price developments for chips and residues were similar to those for round pulpwood: a steep drop in 1996, followed by recovery (Germany) or stability (Sweden). The export unit value for chips from British Columbia also dropped steeply in the first half of 1996 and thereafter stayed at about the same level through the rest of 1996 and all of 1997 (graph 9.3.6).

GRAPH 9.3.5

Sweden: Prices for round pulpwood,
1995 to 1997



Note: Year is divided into four month periods.

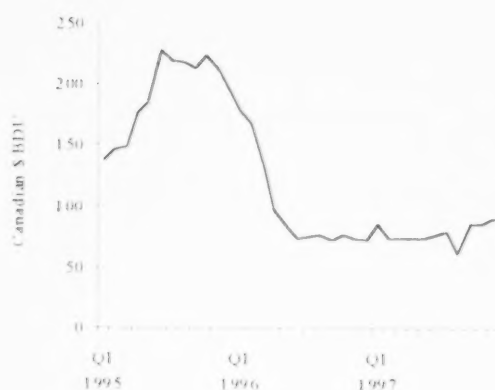
Source: Skogsstyrelsen, 1998.

Europe's imports of wood residues, chips and particles increased by about 0.9 million m³ (8.8%), to reach 11.4 million m³, with steep increases for most major importers except the largest, Austria. The exports of Austria's major supplier, Germany dropped by a similar amount, as did exports by most European exporters. Thus the increase in European imports must have been supplied from outside the region: Europe's net imports of this assortment more than doubled, from 1.7 million m³ in 1996 to 3.6 million m³ in 1997⁹. In 1997, for instance, of total Swedish imports of residues and chips of 788.8 thousand m³, 449.6 thousand m³ came from outside Europe, including 235 from the Baltic States and 202 from Brazil. In 1996, Finland imported 0.9 million m³ of chips and residues of which 0.8 million m³ from Russia.

It is unfortunately no longer possible to identify separately trade in round pulpwood, as this assortment is put together with other types of roundwood, notably logs (table 5.1.3). However, both Europe's largest importers of industrial roundwood, Sweden and Finland, import mostly pulpwood, and concentrate strongly on suppliers in Russia and the Baltic States. In the latter there are ample supplies of pulpwood, and short sea transport distances, and no domestic large-scale pulpwood consumer, for the time being at least. Sweden increased its imports of industrial wood in the rough (in fact mostly pulpwood) by 2.6 million m³ in 1997, and Finland by 159 thousand, to reach a

GRAPH 9.3.6

Export unit value of chips from British Columbia,
1995 to 1997



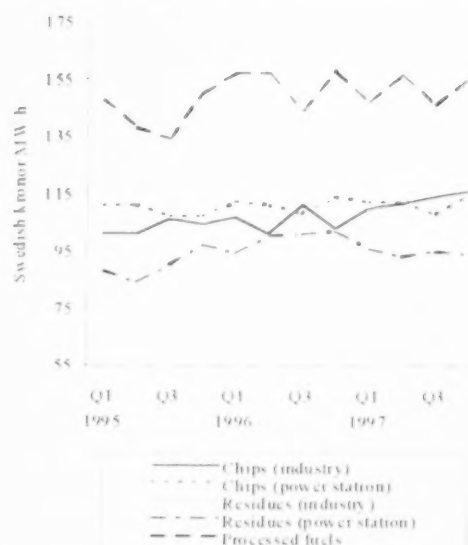
Source: Ministry of Forests, British Columbia, 1998.

combined total of 14.4 million m³, nearly 2.8 million m³ more than in 1996.

For most countries, no regular information is available on fuelwood/wood energy markets as regards volumes or prices, despite the growing importance of this use for wood. The only regular price series, for

GRAPH 9.3.7

Sweden: prices for wood energy, 1995 to 1997



Source: NUTEK, 1998.

⁹ A word of caution may be necessary however, as the quality of trade statistics has declined in recent years, mostly due to problems in implementing the new system for measuring trade within the EU.

Sweden, show that prices have not changed significantly for some years, an inevitable result of the low oil price, which shows no sign of increasing for some time (graph 9.3.7)

The relationship between recycling and energy generation from wood and its effects on timber markets will be the subject of the Timber Committee's special topic discussion in September 1998.

TABLE 9.3.4
Exports and imports of wood residues, chips and particles, 1994 to 1997

	1994	1995	1996	1997 ^a	Change 1996 to 1997	
					Volume	Per cent
	(1000 m ³)					
EXPORTS						
EUROPE	8632	7848	8783	7821	-962	-11.0
of which:						
Germany	3032	1878	2987	2448	-539	-18.0
Austria	1542	2120	1707	1694	-13	-0.8
France	1122	1161	1211	1156	-55	-4.5
Czech Republic	512	492	552	482	-70	-12.6
Belgium-Luxembourg	749	635	465	407	-58	-12.4
Netherlands	417	321	280	280		
Sweden	235	271	311	251	-60	-19.3
Switzerland	134	171	182	226	44	24.2
Norway	104	147	146	191	45	30.7
Finland	160	94	170	161	-9	-5.3
Other countries	625	558	773	526	-247	-32.0
Russian Federation	516	533	533	533		
Canada	1388	1488	1717	1763	46	2.7
United States	7523	5552	7237	7379	142	2.0
North America	8911	7040	8954	9142	188	2.1
IMPORTS						
EUROPE	10695	10204	10485	11413	928	8.8
of which:						
Austria	3023	2470	2583	2200	-383	-14.8
Italy	1088	1235	1155	1499	344	29.8
France	1294	1552	1114	1278	164	14.7
Belgium-Luxembourg	1134	1196	1117	1266	148	13.3
Finland	646	582	740	943	203	27.4
Sweden	775	686	777	921	144	18.5
Germany	766	453	720	780	60	8.3
Norway	453	520	664	636	-28	-4.2
Switzerland	662	608	603	529	-74	-12.3
Hungary	28	121	199	450	251	125.8
Other countries	826	781	813	911	99	12.2
Canada	1198	1344	933	1662	729	78.1
United States	789	1227	1583	1464	-119	-7.5
North America	1987	2571	2516	3126	610	24.2

^a Preliminary

ANNEX TABLE I
SAWN SOFTWOOD

Apparent consumption
(1000 m³)

	1994	1995	1996	1997	% change 1997/1996
Austria	3693	3912	3660	3660	0.0
Belarus	823	823	823	823	0.0
Belgium-Luxemburg	1747	1896	1871	1871	0.0
Croatia	204	194	171	188	9.9
Cyprus	89	89	90	88	-2.1
Czech Republic	2000	1808	1824	1841	0.9
Denmark	2562	2159	1876	1876	0.0
Estonia	-35	64	-109	141	176.9
Finland	2706	2186	2375	3267	37.6
France	7879	8003	7880	7880	0.0
Germany	16134	15930	15985	16666	4.3
Greece	583	583	583	583	0.0
Hungary	786	795	846	730	-13.8
Ireland	795	742	662	709	7.1
Israel	369	369	369	369	0.0
Italy	5596	5363	5330	5896	10.6
Latvia	54	254	228	541	137.1
Lithuania	446	155	330	425	29.0
Moldova	76	82	82	82	0.0
Netherlands	2973	2515	2678	2715	1.4
Norway	2353	2121	2425	2728	12.5
Poland	3393	3781	3829	4422	15.5
Portugal	730	770	828	828	0.0
Romania	437	384	369	200	-45.9
Slovakia	110	82	189	505	167.6
Slovenia	136	118	223	130	-41.7
Spain	2975	3585	3476	3576	2.9
Sweden	3327	4591	3308	4671	41.2
Switzerland	1581	1736	1590	1354	-14.8
The f. Y. R. of Macedonia	38	32	30	30	0.0
Turkey	2305	2504	2453	2367	-3.5
United Kingdom	10180	7061	7431	8624	16.1
EUROPE	75950	73580	73810	78970	7.0
Russian Federation	19350	16931	13190	11078	-16.0
Canada	16415	12542	12978	16901	30.2
United States	113723	112007	119060	120081	0.9
NORTH AMERICA	130138	124560	132030	136990	3.8

Note: European total includes some smaller consumptions of countries not listed in the table above.

ANNEX TABLE 2
SAWN HARDWOOD
 Apparent consumption
 (1000 M3)

	1994	1995	1996	1997	% change 1997/1996
Austria	312	262	300	300	0.0
Belarus	610	610	610	610	0.0
Belgium-Luxemburg	715	664	745	745	0.0
Bulgaria	42	42	42	42	0.0
Croatia	78	77	83	105	26.3
Cyprus	24	21	21	21	-1.0
Czech Republic	314	370	433	337	-22.2
Denmark	247	251	250	250	0.0
Estonia	23	26	24	24	0.0
Finland	61	143	100	110	10.0
France	2657	2779	2507	2698	7.6
Germany	1566	1568	1393	1377	-1.1
Greece	141	141	141	141	0.0
Hungary	290	94	98	46	-53.3
Ireland	100	84	41	113	175.6
Israel	23	23	23	23	0.0
Italy	2669	2748	2431	2620	7.8
Latvia	80	159	20	34	70.0
Lithuania	49	41	56	-1	-101.3
Moldova	17	52	56	57	0.7
Netherlands	743	722	614	618	0.7
Norway	62	58	85	86	1.2
Poland	632	865	619	692	11.8
Portugal	502	589	605	605	0.0
Romania	572	650	439	423	-3.7
Slovakia	201	112	98	234	138.5
Slovenia	108	133	125	113	-9.6
Spain	1276	1457	1177	1555	32.1
Sweden	276	323	293	297	1.4
Switzerland	140	175	134	191	29.8
Turkey	1707	1827	1789	1787	-0.1
United Kingdom	683	682	715	741	3.7
EUROPE	16140	16850	15500	16580	7.0
Russian Federation	6002	3720	4140	3660	-11.6
Canada	1042	1216	1069	1002	-6.3
United States	27428	27547	27476	28178	2.6
NORTH AMERICA	28480	28770	28550	29180	2.2

Note: European total includes some smaller consumptions of countries not listed in the table above

ANNEX TABLE 3
PARTICLE BOARD

Apparent consumption
(1000 m3)

	1994	1995	1996	1997	% change 1997/1996
Austria	1666	1700	1700	1771	4.2
Belarus	270	270	270	270	0.0
Belgium-Luxemburg	2400	2876	3087	3087	0.0
Bulgaria	124	124	124	124	0.0
Croatia	45	40	38	48	26.3
Cyprus	20	19	19	19	-2.6
Czech Republic	536	587	635	737	16.1
Denmark	328	328	328	328	0.0
Estonia	85	155	143	179	25.2
Finland	477	475	605	603	-0.3
France	2567	2733	3030	3289	8.5
Georgia	10	10	10	10	0.0
Germany	8639	8902	8584	9190	7.1
Greece	250	250	250	250	0.0
Hungary	396	407	383	430	12.3
Ireland	85	90	160	200	25.0
Israel	58	58	58	58	0.0
Italy	2202	2450	2205	2750	24.7
Latvia	148	130	143	150	4.9
Lithuania	75	70	110	168	52.3
Moldova	14	10	10	10	0.0
Netherlands	36	43	35	44	25.7
Norway	372	390	384	397	3.4
Poland	1336	1466	1747	2041	16.8
Portugal	757	650	695	695	0.0
Romania	241	228	226	229	1.3
Slovakia	233	243	216	221	2.3
Slovenia	222	249	246	351	42.7
Spain	1730	1863	1970	1970	0.0
Sweden	609	632	577	612	6.1
Switzerland	656	564	530	501	-5.5
The f.Y.R. of Macedonia	181	152	152	152	0.0
Turkey	898	1243	1193	1728	44.8
United Kingdom	1803	2118	2164	2175	0.5
Ukraine	-	-	240	199	-17.1
EUROPE	27960	30250	29930	32430	8.4
Russian Federation	2610	2040	1370	1310	-4.4
Canada	4493	5309	6754	7954	17.8
United States	14664	14429	15985	16263	1.7
NORTH AMERICA	19050	18860	22040	23610	7.1

Note: European total includes some smaller consumptions of countries not listed in the table above

ANNEX TABLE 4

PLYWOOD

Apparent consumption
(1000 M3)

	1994	1995	1996	1997	% change 1997/1996
Albania	6	6	6	6	0.0
Austria	150	150	150	150	0.0
Belarus	104	104	103	122	15.6
Belgium-Luxemburg	68	66	65	65	0.0
Bosnia-Herzegovina	34	34	34	34	0.0
Bulgaria	23	23	23	23	0.0
Croatia	7	7	8	7	-4.2
Cyprus	2	2	2	2	15.0
Czech Republic	76	77	100	110	9.1
Slovakia	26	27	25	32	21.9
Denmark	11	11	11	11	0.0
Estonia	10	11	18	20	10.0
Finland	700	778	869	987	12.0
France	594	559	537	576	6.8
Germany	397	498	512	392	-30.6
Greece	70	70	70	70	0.0
Hungary	8	7	7	8	4.0
Israel	109	109	109	109	0.0
Italy	427	418	402	414	2.9
Latvia	63	73	103	120	14.2
Lithuania	15	15	21	30	29.8
Netherlands	15	15	15	15	0.0
Norway	4	4	20	20	0.0
Poland	124	115	109	118	7.6
Portugal	27	23	23	23	0.0
Romania	97	83	83	81	-2.2
Slovakia	26	27	25	32	21.9
Slovenia	64	75	17	24	29.2
Spain	210	210	210	210	0.0
Sweden	85	108	119	113	-5.3
Switzerland	3	3	3	3	0.0
The f.Y.R. of Macedonia	252	77	77	77	0.0
Turkey	77	75	61	66	7.6
United Kingdom	5	5	5	5	0.0
EUROPE	6180	6410	5900	6050	2.5
Russian Federation	330	270	370	360	-2.8
Canada	1834	1831	1814	1828	0.8
United States	17380	17140	16975	15987	-6.2
NORTH AMERICA	19190	18900	18890	17740	-6.5

Note: European total includes some smaller consumptions of countries not listed in the table above

ANNEX TABLE 5
FIBREBOARD
 Apparent consumption
 (1000 m³)

	1994	1995	1996	1997	% change 1997/1996
Austria	118	118	120	120	0.0
Belgium-Luxemburg	48	48	48	48	0.0
Bulgaria	66	66	66	66	0.0
Croatia	-	-	0	2	87.5
Czech Republic	95	112	98	105	6.7
Denmark	79	79	79	79	0.0
Estonia	79	108	150	167	10.2
Finland	118	117	120	120	0.0
France	483	477	483	555	13.0
Germany	854	854	854	854	0.0
Greece	35	35	35	35	0.0
Hungary	41	54	57	62	8.1
Ireland	180	246	274	330	17.0
Israel	10	10	10	10	0.0
Italy	222	915	800	700	-14.3
Latvia	17	23	23	27	17.6
Lithuania	59	65	65	68	4.3
Netherlands	36	31	27	25	-8.0
Norway	194	166	140	66	-112.1
Poland	515	650	653	719	9.2
Portugal	336	387	387	387	0.0
Romania	102	89	88	78	-12.8
Slovakia	48	54	52	64	18.8
Slovenia	54	39	34	63	46.0
Spain	550	600	590	590	0.0
Sweden	126	223	222	192	-15.6
Switzerland	107	106	140	144	2.8
Turkey	120	131	301	574	47.6
Ukraine	-	-	34.7	41.5	16.4
United Kingdom	400	408	420	460	8.7
EUROPE	4690	5950	5950	6200	0.0
Russian Federation	670	620	420	460	8.7
Canada	827	717	894	1056	15.3
United States	7044	6508	6415	6262	-2.4
NORTH AMERICA	7510	6870	7090	7170	1.1

Note: European total includes some smaller consumptions of countries not listed in the table above

Some facts about the Timber Committee

The Timber Committee is a principal subsidiary body of the ECE (UN Economic Commission for Europe) based in Geneva. It constitutes a forum for cooperation and consultation between member countries on forestry, forest industry and forest product matters. All countries of Europe; the former USSR; United States of America, Canada and Israel are members of the ECE and participate in its work.

The ECE Timber Committee shall, within the context of sustainable development, provide member countries with the information and services needed for policy- and decision-making regarding their forest and forest industry sector ("the sector"), including the trade and use of forest products and, when appropriate, formulate recommendations addressed to member Governments and interested organizations. To this end, it shall:

1. With the active participation of member countries, undertake short-, medium- and long-term analyses of developments in, and having an impact on, the sector, including those offering possibilities for the facilitation of international trade and for enhancing the protection of the environment;
2. In support of these analyses, collect, store and disseminate statistics relating to the sector, and carry out activities to improve their quality and comparability;
3. Provide the framework for cooperation e.g. by organizing seminars, workshops and *ad hoc* meetings and setting up time-limited *ad hoc* groups, for the exchange of economic, environmental and technical information between governments and other institutions of member countries that is needed for the development and implementation of policies leading to the sustainable development of the sector and to the protection of the environment in their respective countries;
4. Carry out tasks identified by the UN/ECE or the Timber Committee as being of priority, including the facilitation of subregional cooperation and activities in support of the economies in transition of central and eastern Europe and of the countries of the region that are developing from an economic point of view;
5. It should also keep under review its structure and priorities and cooperate with other international and intergovernmental organizations active in the sector, and in particular with the FAO (Food and Agriculture Organization of the United Nations) and its European Forestry Commission and with the ILO (International Labour Organisation), in order to ensure complementarity and to avoid duplication, thereby optimizing the use of resources.

More information about the Committee's work may be obtained by writing to:

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